

## GRAM STAINS KIT

## Section 1. Identification

**Product identifier** : GRAM STAINS KIT (VATIAN T A)

**Product code** : KITGRA-4250

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses** : Stains kit

**Manufactured/supplied** : CHAPTEC Inc.  
470 avenue Laurendeau  
Montreal-East, QC  
Canada H1B-5M2  
Tel: +1-514-498-3620

**Emergency telephone number (with hours of operation)** : CANUTEC: +1-613-996-6666 or \*666 (cellular) POISON CONTROL CENTER: (800) 463-5060 24/7

## Section 2. Hazard identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (dermal) - Category 3  
ACUTE TOXICITY (inhalation) - Category 3  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1  
TOXICITY FOR REPRODUCTION, DEVELOPMENTAL TOXICITY – Category 1B  
CARCINOGENICITY – Category 2

**GHS label elements**

**Hazard pictograms**



**Signal word** : Danger

**Section 2. Hazard identification (following)**

: Refer to component SDS

**Section 3. Composition/information on ingredients**

**Section 4. First-aid measures**

**Section 5. Fire-fighting measures**

**Section 6. Accidental release measures**

**Section 7. Handling and storage**

**Section 8. Exposure controls/personal protection**

**Section 9. Physical and chemical properties**

**Section 10. Stability and reactivity**

**Section 11. Toxicological information**

**Section 12. Ecological information**

**Section 13. Disposal considerations**

**Section 14. Transport information**

| DESIGNATION                                     | # CODE      |
|-------------------------------------------------|-------------|
| GENTIAN VIOLET, HUCKER                          | VVY5001-250 |
| STABILIZED GRAM'S IODINE STAIN                  | IJY3650-250 |
| GRAM'S DIFFERENTIATOR 25% ACETONE / 75% ALCOHOL | DEY2575-250 |
| SAFRANIN O, COUNTERSTAIN FOR GRAM               | STY6000-250 |

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

**Section 1. Identification**

|                                                                                      |                                                                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Product identifier                                                                   | : GENTIAN VIOLET - HUCKER, FOR GRAM STAIN                                                              |
| Product code                                                                         | : VWY5001-250, VWY5001-500, VWY5001-4500, VWY5001-1, VWY5001-41, VWY5001, VWY5001-44.                  |
| Other means of identification                                                        | : Not available.                                                                                       |
| Product type                                                                         | : Liquid.                                                                                              |
| <u>Relevant identified uses of the substance or mixture and uses advised against</u> |                                                                                                        |
| Identified uses                                                                      | : Dyes.                                                                                                |
| Manufactured/supplied                                                                | : CHAPTEC Inc.<br>470 avenue Laurendeau<br>Montreal-East, QC<br>Canada H1B-5M2<br>Tel: +1-514-498-3620 |
| Emergency telephone number<br>(with hours of operation)                              | : CANUTEC: +1-613-996-6666 or *666 (cellular) POISON CONTROL CENTER: (800) 463-5060 24/7               |

**Section 2. Hazard identification**

|                                               |                                                                                                                                                                                       |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification of the substance<br>or mixture | : FLAMMABLE LIQUIDS - Category 3<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1<br>CARCINOGENICITY – Category 2B |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

GHS label elementsHazard pictograms

|                   |                                                                                                                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal word       | : Danger                                                                                                                                                                                          |
| Hazard statements | : H226 - Flammable liquid and vapor.<br>H319 - Causes serious eye irritation.<br>H351 - Suspected of causing cancer.<br>H360 – May damage the unborn child.<br>H371 – May cause damage to organs. |

Precautionary statements

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prevention | : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.<br>P271 - Use only outdoors or in a well-ventilated area.<br>P260 - Do not breathe vapor.<br>P270 - Do not eat, drink or smoke when using this product.<br>P264 - Wash hands thoroughly after handling.<br>P272 – Contaminated work clothing should not be allowed out of the workplace. |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response | : P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P361 + P364 + P352 + P312 + P362 + P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 2. Hazard identification

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

## Storage

: P403 + P235 - Store in a well-ventilated place. Keep cool.

## Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Section 3. Composition/information on ingredients

## Substance/mixture

: Mixture

## Other means of identification

: Not available.

| Ingredient name                               | % (w/w)    | CAS number |
|-----------------------------------------------|------------|------------|
| Ethanol                                       | 7.0 - 13.0 | 64-17-5    |
| Methanol                                      | 1.0 - 5.0  | 67-56-1    |
| Hexamethylosaniline chloride (Crystal violet) | 1.0 - 5.0  | 548-62-9   |
| Ammonium oxalate monohydrate                  | 0.1 - 1.0  | 6009-70-7  |

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

Description of necessary first aid measuresEye contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact:

Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

**Section 4. First-aid measures**Most important symptoms/effects, acute and delayedPotential acute health effects

|              |                                                     |
|--------------|-----------------------------------------------------|
| Eye contact  | : Causes serious eye irritation                     |
| Inhalation   | : May be harmful if inhaled.                        |
| Skin contact | : No known significant effects or critical hazards. |
| Ingestion    | : May be harmful if swallowed.                      |

Over-exposure signs/symptoms

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Eye contact  | : Adverse symptoms may include the following: pain or irritation<br>watering redness |
| Inhalation   | : No known significant effects or critical hazards.                                  |
| Skin contact | : Adverse symptoms may include the following:<br>Irritation<br>redness               |
| Ingestion    | : No known significant effects or critical hazards.                                  |

Indication of immediate medical attention and special treatment needed, if necessary

|                            |                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes to physician         | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.                                                                                                                                                                                                                                                                         |
| Specific treatments        | : No specific treatment.                                                                                                                                                                                                                                                                                                                                                                            |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**Extinguishing media

|                                                |                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.                                                                                                                                                                                                                                                     |
| Unsuitable extinguishing media                 | : Do not use water jet or water-based fire extinguishers.                                                                                                                                                                                                                                                            |
| Specific hazards arising from the chemical     | : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.                                                                                                      |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>Carbon dioxide<br>Carbon monoxide                                                                                                                                                                                                                   |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.                                                                                                                                                |

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

**Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Section 7. Handling and storage**Precautions for safe handling**Protective measures**

- : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene**

- : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

**Conditions for safe storage, including any incompatibilities**

- : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 8. Exposure controls/personal protection

Control parametersOccupational exposure limits

| Ingredient name | Exposure limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethanol         | <b>CA Alberta Provincial (Canada, 4/2009).</b><br>8 hrs OEL: 1000 ppm 8 hours.<br>8 hrs OEL: 1880 mg/m <sup>3</sup> 8 hours.<br><b>CA British Columbia Provincial (Canada, 6/2017).</b><br>STEL: 1000 ppm 15 minutes.<br><b>CA Ontario Provincial (Canada, 1/2018).</b><br>STEL: 1000 ppm 15 minutes.<br><b>CA Quebec Provincial (Canada, 1/2014).</b><br>TWA: 1000 ppm 8 hours.<br>TWA: 1880 mg/m <sup>3</sup> 8 hours.<br><b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br>STEL: 1250 ppm 15 minutes.<br>TWA: 1000 ppm 8 hours.                                                                                                                                                                                                                                                                                                                          |
| Methanol        | <b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b><br>8 hrs OEL: 262 mg/m <sup>3</sup> 8 hours.<br>8 hrs OEL: 200 ppm 8 hours.<br>15 min OEL: 250 ppm 15 minutes.<br>15 min OEL: 328 mg/m <sup>3</sup> 15 minutes.<br><b>CA British Columbia Provincial (Canada, 6/2017). Absorbed through skin.</b><br>TWA: 200 ppm 8 hours.<br>STEL: 250 ppm 15 minutes.<br><b>CA Ontario Provincial (Canada, 1/2018). Absorbed through skin.</b><br>TWA: 200 ppm 8 hours.<br>STEL: 250 ppm 15 minutes.<br><b>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.</b><br>TWA: 200 ppm 8 hours.<br>TWA: 262 mg/m <sup>3</sup> 8 hours.<br>STEV: 250 ppm 15 minutes.<br>STEV: 328 mg/m <sup>3</sup> 15 minutes.<br><b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b><br>STEL: 250 ppm 15 minutes.<br>TWA: 200 ppm 8 hours. |

**Appropriate engineering controls**

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures**Hygiene measures**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection**Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

**Section 8. Exposure controls/personal protection**

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Body protection        | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. |
| Other skin protection  | : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.                                                                                                                                                                                               |
| Respiratory protection | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.                                                                                                                                        |

**Section 9. Physical and chemical properties**

|                                              |                                |
|----------------------------------------------|--------------------------------|
| Appearance                                   |                                |
| Physical state                               | : Liquid.                      |
| Color                                        | : Not available.               |
| Odor                                         | : Not available.               |
| Odor threshold                               | : Not available.               |
| pH                                           | : Not available.               |
| Melting point                                | : Not available.               |
| Boiling point                                | : Not available.               |
| Flash point                                  | : Not available.               |
| Evaporation rate                             | : Not available.               |
| Flammability (solid, gas)                    | : Not available.               |
| Lower and upper explosive (flammable) limits | : Not available.               |
| Vapor pressure                               | : Not available.               |
| Vapor density                                | : Not available.               |
| Relative density                             | : Not available.               |
| Solubility                                   | : Completely soluble in water. |
| Partition coefficient: n-octanol/water       | : Not available.               |
| Auto-ignition temperature                    | : Not available.               |
| Decomposition temperature                    | : Not available.               |
| Viscosity                                    | : Not available.               |
| Flow time (ISO 2431)                         | : Not available.               |

**Section 10. Stability and reactivity**

|                    |                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------|
| Reactivity         | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable.                                                                     |

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 10. Stability and reactivity

|                                           |                                                                                                                                                                           |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Possibility of hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.                                                                                         |
| <b>Conditions to avoid</b>                | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| <b>Incompatible materials</b>             | : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.                                                                          |
| <b>Hazardous decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.                                                                    |

## Section 11. Toxicological information

Information on toxicological effectsAcute toxicity

| Product/ingredient name                        | Result                | Species | Dose                     | Exposure |
|------------------------------------------------|-----------------------|---------|--------------------------|----------|
| Ethanol                                        | LC50 Inhalation Vapor | Rat     | 124700 mg/m <sup>3</sup> | 4 hours  |
|                                                | LD50 Oral             | Rat     | 7 g/kg                   | -        |
| Methanol                                       | LC50 Inhalation Gas.  | Rat     | 145000 ppm               | 1 hours  |
|                                                | LC50 Inhalation Gas.  | Rat     | 64000 ppm                | 4 hours  |
|                                                | LD50 Dermal           | Rabbit  | 15800 mg/kg              | -        |
|                                                | LD50 Oral             | Rat     | 5600 mg/kg               | -        |
| Hexamethylrosaniline chloride (Crystal violet) | LD50 Oral             | Rat     | 420 mg/kg                | -        |

Irritation/Corrosion

| Product/ingredient name | Result                   | Species | Score | Exposure           | Observation |
|-------------------------|--------------------------|---------|-------|--------------------|-------------|
| Ethanol                 | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 mg    | -           |
|                         | Eyes – Moderate irritant | Rabbit  | -     | 0.066666667minutes | -           |
|                         | Eyes - Moderate irritant | Rabbit  | -     | 100 mg             | -           |
|                         | Eyes - Severe irritant   | Rabbit  | -     | 100 µl             | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 500mg              | -           |
|                         |                          |         | -     | 400mg              | -           |

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

| Product/ingredient name                        | OSHA | IARC | NTP                         |
|------------------------------------------------|------|------|-----------------------------|
| Hexamethylrosaniline chloride (Crystal violet) | +    | 2B   | Suspected of causing cancer |

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 11. Toxicological information

Specific target organ toxicity (single exposure)

| Name     | Category   | Target organs  |
|----------|------------|----------------|
| Methanol | Category 1 | Not determined |

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard.

There is no data available.

Information on the likely routes of exposure

: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effectsEye contact

: Causes serious eye irritation

Inhalation

: May be harmful if inhaled.

Skin contact

: No known significant effects or critical hazards.

Ingestion

: May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristicsEye contact

: Adverse symptoms may include the following:  
pain or irritation, watering, redness

Inhalation

: No known significant effects or critical hazards.

Skin contact

: Adverse symptoms may include the following: irritation  
redness

Ingestion

: No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposureShort term exposurePotential immediate effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Long term exposurePotential immediate effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Potential chronic health effectsGeneral

: No known significant effects or critical hazards.

Carcinogenicity

: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity

: No known significant effects or critical hazards.

Teratogenicity

: No known significant effects or critical hazards.

Developmental effects

: No known significant effects or critical hazards.

Fertility effects

: No known significant effects or critical hazards.

Numerical measures of toxicityAcute toxicity estimates

There is no data available.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 12. Ecological information

Toxicity

| Product/ingredient name | Result                                                                                                                                                                                     | Species                                                                                                                                                                           | Exposure                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Ethanol                 | Acute EC50 1074 mg/L Fresh water<br>Acute LC50 5680 mg/L Fresh water<br>Acute LC50 11000000 µg/L Marine water<br>Chronic NOEC 4.995 mg/L Marine water<br>Chronic NOEC 100 µl/L Fresh water | Crustaceans - Cypris subglobosa<br>Daphnia - Daphnia magna - Neonate<br>Fish - Alburnus alburnus<br>Algae - Ulva pertusa                                                          | 48 hours<br>48 hours<br>96 hours<br>96 hours            |
| Methanol                | Chronic NOEC 0.375 µl/L Fresh water<br>Acute LC50 2500000 µg/L Marine water<br>Acute LC50 3289 mg/L Fresh water<br>Acute LC50 290 mg/L Fresh water                                         | Daphnia - Daphnia magna - Neonate<br>Fish - Gambusia holbrooki - Larvae<br>Crustaceans - Crangon crangon - Adult<br>Daphnia - Daphnia magna - Neonate<br>Fish - Danio rerio - Egg | 21 days<br>12 weeks<br>48 hours<br>48 hours<br>96 hours |

Persistence and degradability

There is no data available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-----|-----------|
| Ethanol                 | -0.35  | -   | Low       |
| Methanol                | -0.77  | <10 | Low       |

Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 14. Transport information

|                            | TDG Classification                                                                     | IMDG                                                                                    | IATA                                                                                     |
|----------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| UN number                  | UN1993                                                                                 | UN1993                                                                                  | UN1993                                                                                   |
| UN proper shipping name    | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                        | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                         | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                          |
| Transport hazard class(es) | 3<br> | 3<br> | 3<br> |
| Packing group              | III                                                                                    | III                                                                                     | III                                                                                      |
| Environmental hazards      | No.                                                                                    | No.                                                                                     | No.                                                                                      |

Additional information

|                              |                                                                                                                                                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TDG Classification           | : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).                                                                                       |
| IMDG                         | : <u>Emergency schedules</u> F-E, S-D                                                                                                                                                                               |
| Emergency Response           | : 131                                                                                                                                                                                                               |
| Special precautions for user | : <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |

## Section 15. Regulatory information

Canadian lists

|                             |                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------|
| Canada inventory (DSL NDSL) | : All components are listed or exempted.                                               |
| Canadian NPRI               | : The following components are listed: Ethanol; Methanol.                              |
| CEPA Toxic substances       | : The following components are listed: Hexamethylrosaniline chloride (Crystal violet). |

## GENTIAN VIOLET - HUCKER, FOR GRAM STAIN

## Section 16. Other information

Procedure used to derive the classification

| Classification                                                                                                                                                                      | Justification                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| FLAMMABLE LIQUIDS - Category 3<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1<br>CARCINOGENICITY – Category 2B | On basis of test data<br>Calculation method<br>Calculation method<br>Expert judgment |

History

Date of issue : 10-10-2025

Date of previous issue : Not applicable.

Version : 2

Prepared by : ChapTec

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations  
HPR = Hazardous Products Regulations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above- named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## GRAM STABILIZED IODINE STAIN

## Section 1. Identification

|                                                                                      |                                                                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Product identifier                                                                   | : GRAM STABILIZED IODINE STAIN                                                                         |
| Product code                                                                         | : IJY3650-250, IJY3650-500, IJY3650-1, IJY3650-2, IJY3650, IJY3650-44.                                 |
| Other means of identification                                                        | : Not available.                                                                                       |
| Product type                                                                         | : Liquid.                                                                                              |
| <u>Relevant identified uses of the substance or mixture and uses advised against</u> |                                                                                                        |
| Identified uses                                                                      | : Stain.                                                                                               |
| Manufactured/supplied                                                                | : CHAPTEC Inc.<br>470 avenue Laurendeau<br>Montreal-East, QC<br>Canada H1B-5M2<br>Tel: +1-514-498-3620 |
| Emergency telephone number<br>(with hours of operation)                              | : CANUTEC: +1-613-996-6666 or *666 (cellular) POISON CONTROL CENTER: (800) 463-5060 24/7               |

## Section 2. Hazard identification

|                                               |                                                                                            |
|-----------------------------------------------|--------------------------------------------------------------------------------------------|
| Classification of the substance<br>or mixture | : SKIN CORROSION/IRRITATION - Category 2<br>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
|-----------------------------------------------|--------------------------------------------------------------------------------------------|

GHS label elements

## Hazard pictograms



|             |                                                                           |
|-------------|---------------------------------------------------------------------------|
| Signal word | : Warning                                                                 |
|             | : H315 - Causes skin irritation.<br>H319 - Causes serious eye irritation. |

Precautionary statements

|            |                                                                                                             |
|------------|-------------------------------------------------------------------------------------------------------------|
| Prevention | : P264 - Wash hands thoroughly after handling<br>P270 - Do not eat, drink or smoke when using this product. |
|------------|-------------------------------------------------------------------------------------------------------------|

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response | : P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.<br>Rinse mouth.<br>P302 + P362+P363 + P352 - IF ON SKIN: Take off contaminated clothing and wash it before reuse.<br>P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P332 + P313 - if skin irritation occurs: Get medical advice/attention.<br>P337 + P313 - if eyes irritation persists: Get medical advice/attention. |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|         |                                     |
|---------|-------------------------------------|
| Storage | : Store in an appropriate location. |
|---------|-------------------------------------|

|          |                                                                                                                            |
|----------|----------------------------------------------------------------------------------------------------------------------------|
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
|----------|----------------------------------------------------------------------------------------------------------------------------|

## GRAM STABILIZED IODINE STAIN

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture.

**Other means of identification** : Not available.

| Ingredient name             | % (w/w)   | CAS number |
|-----------------------------|-----------|------------|
| Polyvinylpyrrolidone iodine | 1.0 - 5.0 | 25655-41-8 |
| Potassium Iodide            | 0.1 - 0.1 | 7681-11-0  |

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

Description of necessary first aid measures**Eye contact:**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation:**

Get medical attention if symptoms develop.

**Skin contact:**

Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

**Ingestion:**

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayedPotential acute health effects

**Eye contact** : Causes eye irritation.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes skin irritation.

**Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness.

**Ingestion** : No known significant effects or critical hazards.

## GRAM STABILIZED IODINE STAIN

**Section 4. First-aid measures**Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**Extinguishing media

- Suitable extinguishing media** : Use fire fighting measures that suit the environment.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : No specific fire risk of fire or explosion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
Carbon monoxide.  
Carbon dioxide.  
Hydrogen iodide.  
Nitrogen oxides.
- Special protective actions for fire-fighters** : If there is a fire, promptly isolate the scene by removing all persons from the vicinity of the incident. Take no action involving any personal risk or in absence of adequate personal training.
- Special protective equipment for fire-fighters** : It is imperative that Fire-fighters wear appropriate protective equipment and self-contained breathing apparatus (SCBA) equipped with a positive pressure face mask.

**Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non- emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Eliminate spills an affluent treatment station or proceed as follows. Contain and collect spillage with non combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## GRAM STABILIZED IODINE STAIN

**Section 7. Handling and storage**Precautions for safe handling**Protective measures**

: Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene**

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Section 8. Exposure controls/personal protection**Control parameters

None

**Appropriate engineering controls**

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls**

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures**Hygiene measures**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection**Hand protection**

: Wear rubber gloves. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection**

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Other skin protection**

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

**Respiratory protection**

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## GRAM STABILIZED IODINE STAIN

## Section 9. Physical and chemical properties

|                                              |                     |
|----------------------------------------------|---------------------|
| Appearance                                   |                     |
| Physical state                               | : Liquid.           |
| Color                                        | : Brown             |
| Odor                                         | : Not available.    |
| Odor threshold                               | : Not available.    |
| pH                                           | : Not available.    |
| Melting point                                | : Not available.    |
| Boiling point                                | : Not available.    |
| Flash point                                  | : Not available.    |
| Evaporation rate                             | : Not available.    |
| Flammability (solid, gas)                    | : Not available.    |
| Lower and upper explosive (flammable) limits | : Not available.    |
| Vapor pressure                               | : Not available.    |
| Vapor density                                | : Not available.    |
| Relative density                             | : 1.025             |
| Solubility                                   | : Soluble in water. |
| Partition coefficient: n-octanol/water       | : Not available.    |
| Auto-ignition temperature                    | : Not available.    |
| Decomposition temperature                    | : Not available.    |
| Viscosity                                    | : Not available.    |
| Flow time (ISO 2431)                         | : Not available.    |

## Section 10. Stability and reactivity

|                                    |                                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------------|
| Reactivity                         | : No specific test data related to reactivity available for this product or its ingredients.           |
| Chemical stability                 | : The product is stable.                                                                               |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.                      |
| Conditions to avoid                | : There is no data available.                                                                          |
| Incompatible materials             | : Reactive or incompatible with the following materials: oxidizing and reducing materials, bases.      |
| Hazardous decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

## GRAM STABILIZED IODINE STAIN

## Section 11. Toxicological information

Information on toxicological effectsAcute toxicity

| Product/ingredient name | Result    | Species | Dose          | Exposure |
|-------------------------|-----------|---------|---------------|----------|
| Citric acid             | DL50 Oral | Rat     | > 4,588 mg/kg | -        |

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard.

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

**Eye contact** : Causes eye irritation.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes skin irritation.

**Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness.

**Ingestion** : No known significant effects or critical hazards.

## GRAM STABILIZED IODINE STAIN

## Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposureShort term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicityAcute toxicity estimates

There is no data available.

## Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

Disposal methods

: It is important to minimize or even avoid the generation of waste whenever possible. Disposal of this product, solutions and any by-products must comply with the provisions of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal company. Do not discharge untreated waste into sewers unless, it is in accordance with the requirements of all competent authorities. Waste packaging must be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain product residue. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## GRAM STABILIZED IODINE STAIN

## Section 14. Transport information

|                            | TDG Classification | IMDG          | IATA          |
|----------------------------|--------------------|---------------|---------------|
| UN number                  | Not regulated      | Not regulated | Not regulated |
| UN proper shipping name    | -                  | -             | -             |
| Transport hazard class(es) | -                  | -             | -             |
| Packing group              | -                  | -             | -             |
| Environmental hazards      | No.                | No.           | No.           |

Additional information

Emergency Response : Not applicable.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

Canadian lists

Canada inventory (DSL NDSL) : All components are listed or exempted.

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : All components are listed or exempted.

## GRAM STABILIZED IODINE STAIN

## Section 16. Other information

Procedure used to derive the classification

| Classification | Justification |
|----------------|---------------|
| Not classified |               |

History

Date of issue : 15-10-2025

Date of previous issue : Not applicable.

Version : 1

Prepared by : ChapTec

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations  
HPR = Hazardous Products Regulations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above- named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 1. Identification

|                                                                                      |                                                                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Product identifier                                                                   | : GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL                                                    |
| Product code                                                                         | : DEY2575-250, DEY2575-4250, DEY2575-500, DEY2575-1, DEY2575-41, DEY2575.                              |
| Other means of identification                                                        | : Not available.                                                                                       |
| Product type                                                                         | : Liquid.                                                                                              |
| <u>Relevant identified uses of the substance or mixture and uses advised against</u> |                                                                                                        |
| Identified uses                                                                      | : Staining reagent                                                                                     |
| Manufactured/supplied                                                                | : CHAPTEC Inc.<br>470 avenue Laurendeau<br>Montreal-East, QC<br>Canada H1B-5M2<br>Tel: +1-514-498-3620 |
| Emergency telephone number<br>(with hours of operation)                              | : CANUTEC: +1-613-996-6666 or *666 (cellular) POISON CONTROL CENTER: (800) 463-5060 24/7               |

## Section 2. Hazard identification

|                                               |                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification of the substance<br>or mixture | : FLAMMABLE LIQUIDS - Category 2<br>ACUTE TOXICITY (oral) - Category 4<br>ACUTE TOXICITY (dermal) - Category 3<br>ACUTE TOXICITY (inhalation) - Category 3<br>SKIN CORROSION/IRRITATION - Category 2<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

GHS label elements  
Hazard pictograms

|                   |                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal word       | : Danger                                                                                                                                                                                                                                       |
| Hazard statements | : H225 - Highly flammable liquid and vapor.<br>H311 + H331 - Toxic in contact with skin or if inhaled. H302 - Harmful if swallowed.<br>H319 - Causes serious eye irritation. H315 - Causes skin irritation.<br>H370 - Causes damage to organs. |

Precautionary statements  
Prevention

: P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor.  
P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response | : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or physician.<br>P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P361+P364 + P352 + P312 + P362+P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.<br>P332 + P313 - If skin irritation occurs: Get medical attention. |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 2. Hazard identification

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

## Storage

: P403 + P235 - Store in a well-ventilated place. Keep cool.

## Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Section 3. Composition/information on ingredients

## Substance/mixture

: Mixture

## Other means of identification

: Not available.

| Ingredient name | % (w/w)     | CAS number |
|-----------------|-------------|------------|
| Ethanol         | 45.0 - 70.0 | 64-17-5    |
| Acetone         | 10.0 - 30.0 | 64-67-1    |
| Methanol        | 7.0 - 13.0  | 67-56-1    |
| Ethyl acetate   | 0.1 - 1.0   | 141-78-6   |

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

Description of necessary first aid measuresEye contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact:

Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

**Section 4. First-aid measures**Most important symptoms/effects, acute and delayedPotential acute health effects

|              |                                                       |
|--------------|-------------------------------------------------------|
| Eye contact  | : Causes serious eye irritation.                      |
| Inhalation   | : Toxic if inhaled.                                   |
| Skin contact | : Toxic in contact with skin. Causes skin irritation. |
| Ingestion    | : Harmful if swallowed.                               |

Over-exposure signs/symptoms

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Eye contact  | : Adverse symptoms may include the following: pain or irritation<br>watering redness |
| Inhalation   | : No known significant effects or critical hazards.                                  |
| Skin contact | : Adverse symptoms may include the following:<br>Irritation<br>redness               |
| Ingestion    | : No known significant effects or critical hazards.                                  |

Indication of immediate medical attention and special treatment needed, if necessary

|                            |                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes to physician         | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.                                                                                                                                                                                                                                                                         |
| Specific treatments        | : No specific treatment.                                                                                                                                                                                                                                                                                                                                                                            |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**Extinguishing media

|                                                |                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.                                                                                                                                                                                                                                                     |
| Unsuitable extinguishing media                 | : Do not use water jet or water-based fire extinguishers.                                                                                                                                                                                                                                                            |
| Specific hazards arising from the chemical     | : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.                                                                                               |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide                                                                                                                                                                                                                   |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.                                                                                                                                                |

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

**Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Section 7. Handling and storage**Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 8. Exposure controls/personal protection

[Control parameters](#)[Occupational exposure limits](#)

| Ingredient name | Exposure limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethanol         | <p><b>CA Alberta Provincial (Canada, 4/2009).</b><br/> 8 hrs OEL: 1000 ppm 8 hours.<br/> 8 hrs OEL: 1880 mg/m<sup>3</sup> 8 hours.<br/> <b>CA British Columbia Provincial (Canada, 6/2017).</b><br/> STEL: 1000 ppm 15 minutes.<br/> <b>CA Ontario Provincial (Canada, 1/2018).</b><br/> STEL: 1000 ppm 15 minutes.<br/> <b>CA Quebec Provincial (Canada, 1/2014).</b><br/> TWA: 1000 ppm 8 hours.<br/> TWA: 1880 mg/m<sup>3</sup> 8 hours.<br/> <b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br/> STEL: 1250 ppm 15 minutes.<br/> TWA: 1000 ppm 8 hours.</p>                                                                                                                                                                                                                                                                                                                                    |
| Acetone         | <p><b>CA Alberta Provincial (Canada, 4/2009).</b><br/> 8 hrs OEL: 1200 mg/m<sup>3</sup> 8 hours.<br/> 15 min OEL: 1800 mg/m<sup>3</sup> 15 minutes.<br/> 8 hrs OEL: 500 ppm 8 hours.<br/> 15 min OEL: 750 ppm 15 minutes.<br/> <b>CA British Columbia Provincial (Canada, 7/2016).</b><br/> TWA: 250 ppm 8 hours.<br/> STEL: 500 ppm 15 minutes.<br/> <b>CA Ontario Provincial (Canada, 7/2015).</b><br/> TWA: 500 ppm 8 hours.<br/> STEL: 750 ppm 15 minutes.<br/> <b>CA Québec Provincial (Canada, 1/2014).</b><br/> VEMP: 500 ppm 8 hours.<br/> VEMP: 1190 mg/m<sup>3</sup> 8 hours.<br/> VECD: 1000 ppm 15 minutes.<br/> VECD: 2380 mg/m<sup>3</sup> 15 minutes.<br/> <b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br/> STEL: 750 ppm 15 minutes.<br/> TWA: 500 ppm 8 hours</p>                                                                                                              |
| Methanol        | <p><b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b><br/> 8 hrs OEL: 262 mg/m<sup>3</sup> 8 hours.<br/> 8 hrs OEL: 200 ppm 8 hours.<br/> 15 min OEL: 250 ppm 15 minutes.<br/> 15 min OEL: 328 mg/m<sup>3</sup> 15 minutes.<br/> <b>CA British Columbia Provincial (Canada, 6/2017). Absorbed through skin.</b><br/> TWA: 200 ppm 8 hours.<br/> STEL: 250 ppm 15 minutes.<br/> <b>CA Ontario Provincial (Canada, 1/2018). Absorbed through skin.</b><br/> TWA: 200 ppm 8 hours.<br/> STEL: 250 ppm 15 minutes.<br/> <b>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.</b><br/> TWA: 200 ppm 8 hours.<br/> TWA: 262 mg/m<sup>3</sup> 8 hours.<br/> STEL: 250 ppm 15 minutes.<br/> STEL: 328 mg/m<sup>3</sup> 15 minutes.<br/> <b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b><br/> STEL: 250 ppm 15 minutes.<br/> TWA: 200 ppm 8 hours.</p> |
| Ethyl acetate   | <p><b>CA Alberta Provincial (Canada, 4/2009).</b><br/> 8 hrs OEL: 1440 mg/m<sup>3</sup> 8 hours.<br/> 8 hrs OEL: 400 ppm 8 hours.<br/> <b>CA British Columbia Provincial (Canada, 6/2017).</b><br/> TWA: 150 ppm 8 hours.<br/> <b>CA Ontario Provincial (Canada, 1/2018).</b><br/> TWA: 400 ppm 8 hours.<br/> <b>CA Quebec Provincial (Canada, 1/2014).</b><br/> TWA: 400 ppm 8 hours.<br/> TWA: 14 mg/m<sup>3</sup> 8 hours.<br/> STEL: 40 ppm 15 minutes.<br/> <b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br/> STEL: 500 ppm 15 minutes.<br/> TWA: 400 ppm 8 hours.</p>                                                                                                                                                                                                                                                                                                                      |

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

**Section 8. Exposure controls/personal protection****Appropriate engineering controls**

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

**Individual protection measures****Hygiene measures**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection****Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Section 9. Physical and chemical properties****Appearance****Physical state**

: Liquid.

**Color**

: Colorless.

**Odor**

: Acetone

**Odor threshold**

: Not available.

**pH**

: Not available.

**Melting point**

: Not available.

**Boiling point**

: Not available.

**Flash point**

: Not available.

**Evaporation rate**

: Not available.

**Flammability (solid, gas)**

: Not available.

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 9. Physical and chemical properties

|                                              |                         |
|----------------------------------------------|-------------------------|
| Lower and upper explosive (flammable) limits | : Not available.        |
| Vapor pressure                               | : Not available.        |
| Vapor density                                | : Not available.        |
| Relative density                             | : 0.795 @ 20°C (68 °F). |
| Solubility                                   | : Not available.        |
| Partition coefficient: n-octanol/water       | : Not available.        |
| Auto-ignition temperature                    | : Not available.        |
| Decomposition temperature                    | : Not available.        |
| Viscosity                                    | : Not available.        |

## Section 10. Stability and reactivity

|                                    |                                                                                                                                                                           |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : No specific test data related to reactivity available for this product or its ingredients.                                                                              |
| Chemical stability                 | : The product is stable.                                                                                                                                                  |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.                                                                                         |
| Conditions to avoid                | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials             | : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.                                                                          |
| Hazardous decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.                                                                    |

## Section 11. Toxicological information

Information on toxicological effectsAcute toxicity

| Product/ingredient name | Result                | Species | Dose                     | Exposure |
|-------------------------|-----------------------|---------|--------------------------|----------|
| Ethanol                 | LC50 Inhalation Vapor | Rat     | 124700 mg/m <sup>3</sup> | 4 hours  |
|                         | LD50 Oral             | Rat     | 7 g/kg                   | -        |
| Acetone                 | LD50 Oral             | Rat     | 5800 mg/kg               | -        |
| Methanol                | LC50 Inhalation Gas.  | Rat     | 145000 ppm               | 1 hours  |
|                         | LC50 Inhalation Gas.  | Rat     | 64000 ppm                | 4 hours  |
|                         | LD50 Dermal           | Rabbit  | 15800 mg/kg              | -        |
|                         | LD50 Oral             | Rat     | 5600 mg/kg               | -        |
| Ethyl acetate           | LD50 Oral             | Rat     | 5620 mg/kg               | -        |

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 11. Toxicological information

Irritation/Corrosion

| Product/ingredient name | Result                   | Species | Score | Exposure           | Observation |
|-------------------------|--------------------------|---------|-------|--------------------|-------------|
| Ethanol                 | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 mg    | -           |
|                         | Eyes – Moderate irritant | Rabbit  | -     | 0.066666667minutes | -           |
|                         |                          |         |       | 100 mg             |             |
|                         | Eyes - Moderate irritant | Rabbit  | -     | 100 µl             | -           |
|                         | Eyes - Severe irritant   | Rabbit  | -     | 500mg              | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 400mg              | -           |
|                         | Eyes - Mild irritant     | Rabbit  | -     | 10 µl              | -           |
|                         | Skin - Moderate irritant | Rabbit  | -     | 24 heures 20mg     | -           |
|                         | Eyes - Severe irritant   | Rabbit  | -     | 20 mg              | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 24 heures 500mg    | -           |
| Acetone                 | Skin - Mild irritant     | Rabbit  | -     | 395 mg             | -           |

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

| Name          | Category   | Target organs    |
|---------------|------------|------------------|
| Acetone       | Category 3 | Narcotic effects |
| Methanol      | Category 1 | Not determined   |
| Ethyl acetate | Category 3 | Narcotic effects |

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard.

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Toxic if inhaled.

**Skin contact** : Toxic in contact with skin. Causes skin irritation.

**Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 11. Toxicological information

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
irritation redness

**Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : Confusion, nausea, dizziness.

Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

There is no data available.

## Section 12. Ecological information

Toxicity

| Product/ingredient name | Result                                                                                                                                                                                                                                                                                                                                           | Species                                                                                                                                                                                                                                                                                                              | Exposure                                                                                                         |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Ethanol                 | Acute EC50 1074 mg/L Fresh water<br>Acute LC50 5680 mg/L Fresh water<br>Acute LC50 11000000 µg/L Marine water<br>Chronic NOEC 4.995 mg/L Marine water<br>Chronic NOEC 100 µl/L Fresh water                                                                                                                                                       | Crustaceans - Cypris subglobosa<br>Daphnia - Daphnia magna - Neonate<br>Fish - Alburnus alburnus<br>Algae - Ulva pertusa                                                                                                                                                                                             | 48 hours<br>48 hours<br>96 hours<br>96 hours                                                                     |
| Acetone                 | Chronic NOEC 0.375 µl/L Fresh water<br>Acute EC50 7200000 µg/l Fresh water<br>Acute LC50 6000000 µg/l Fresh water<br>Acute LC50 6900 mg/L Fresh water<br>Acute LC50 5600 ppm Fresh water<br>Chronic NOEC 4.95 mg/L Marine water<br>Chronic NOEC 0.016 ml/L Fresh water<br>Chronic NOEC 0.1 ml/L Fresh water<br>Chronic NOEC 0.1 mg/L Fresh water | Daphnia - Daphnia magna - Neonate<br>Fish - Gambusia holbrooki - Larvae<br>Algae - Selenastrum sp.<br>Crustaceans - Gammarus pulex<br>Daphnia - Daphnia magna<br>Fish - Poecilia reticulata<br>Algae - Ulva pertusa<br>Crustaceans - Daphniidae<br>Daphnia - Daphnia magna - Néonate<br>Fish - Fundulus heteroclitus | 21 days<br>12 weeks<br>96 hours<br>48 hours<br>48 hours<br>96 hours<br>96 hours<br>21 days<br>21 days<br>4 weeks |
| Methanol                | Acute LC50 2500000 µg/L Marine water<br>Acute LC50 3289 mg/L Fresh water<br>Acute LC50 290 mg/L Fresh water                                                                                                                                                                                                                                      | Crustaceans - Crangon crangon - Adult<br>Daphnia - Daphnia magna - Neonate<br>Fish - Danio rerio - Egg                                                                                                                                                                                                               | 48 hours<br>48 hours<br>96 hours                                                                                 |
| Ethyl acetate           | Acute EC50 2500000 µg/L Fresh water<br>Acute LC50 750000 µg/L Fresh water<br>Acute LC50 154000 µg/L Fresh water<br>Acute LC50 212500 µg/L Fresh water<br>Chronic NOEC 2400 µg/L Fresh water<br>Chronic NOEC 75.6 mg/L Fresh water                                                                                                                | Algae - Selenastrum sp.<br>Crustaceans - Gammarus pulex<br>Daphnia - Daphnia cucullata<br>Fish - Heteropneustes fossilis<br>Daphnia - Daphnia magna<br>Fish - Pimephales promelas - Embryo                                                                                                                           | 96 hours<br>48 hours<br>48 hours<br>96 hours<br>21 days<br>32 days                                               |

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 12. Ecological information

Persistence and degradability

There is no data available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-----|-----------|
| Ethanol                 | -0.35  | -   | Low       |
| Acetone                 | -0.23  | -   | Low       |
| Methanol                | -0.77  | <10 | Low       |
| Ethyl acetate           | 0.68   | 30  | Low       |

Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                                   | TDG Classification                                                                             | IMDG                                                                                            | IATA                                                                                             |
|-----------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>UN number</b>                  | UN1992                                                                                         | UN1992                                                                                          | UN1992                                                                                           |
| <b>UN proper shipping name</b>    | FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethanol, Methanol, Acetone)                                   | FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethanol, Methanol, Acetone)                                    | FLAMMABLE LIQUID, TOXIC, N.O.S. (Ethanol, Methanol, Acetone)                                     |
| <b>Transport hazard class(es)</b> | 3 (6.1)<br> | 3 (6.1)<br> | 3 (6.1)<br> |
| <b>Packing group</b>              | II                                                                                             | II                                                                                              | II                                                                                               |
| <b>Environmental hazards</b>      | No.                                                                                            | No.                                                                                             | No.                                                                                              |

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

### Section 14. Transport information

#### Additional information

##### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.26-2.36 (Class 6).

##### IMDG

: Emergency schedules F-E, S-D

##### Emergency Response

: 131

##### Special precautions for user

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Section 15. Regulatory information

#### Canadian lists

##### Canada inventory (DSL NDSL)

: All components are listed or exempted.

##### Canadian NPRI

: The following components are listed: Ethanol; Methanol; Ethyl acetate, Acetone.

##### CEPA Toxic substances

: None of the components are listed.

## GRAM'S DIFFERENTIATOR – 25% ACETONE / 75% ALCOHOL

## Section 16. Other information

Procedure used to derive the classification

| Classification                                                                                                                                                                                                                                                                                                          | Justification                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| FLAMMABLE LIQUIDS - Category 2<br>ACUTE TOXICITY (oral) - Category 4<br>ACUTE TOXICITY (dermal) - Category 3<br>ACUTE TOXICITY (inhalation) - Category 3<br>SKIN CORROSION/IRRITATION - Category 2<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 | On basis of test data<br>Calculation method<br>Expert judgment<br>On basis of test data<br>Expert judgment<br>Calculation method<br>Calculation method |

History

Date of issue : 01-02-2025

Date of previous issue : Not applicable.

Version : 1

Prepared by : ChapTec

Key to abbreviations : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations  
 HPR = Hazardous Products Regulations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above- named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## SAFRANINE O - FOR GRAM STAIN

## Section 1. Identification

|                                                                                      |                                                                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Product identifier                                                                   | : SAFRANINE O - FOR GRAM STAIN                                                                         |
| Product code                                                                         | : STY6000-250, STY6000-500, STY6000-4500, STY6000-1, STY6000-41, STY6000, STY6000-44.                  |
| Other means of identification                                                        | : Not available.                                                                                       |
| Product type                                                                         | : Liquid.                                                                                              |
| <u>Relevant identified uses of the substance or mixture and uses advised against</u> |                                                                                                        |
| Identified uses                                                                      | : Dyes.                                                                                                |
| Manufactured/supplied                                                                | : CHAPTEC Inc.<br>470 avenue Laurendeau<br>Montreal-East, QC<br>Canada H1B-5M2<br>Tel: +1-514-498-3620 |
| Emergency telephone number<br>(with hours of operation)                              | : CANUTEC: +1-613-996-6666 or *666 (cellular) POISON CONTROL CENTER: (800) 463-5060 24/7               |

## Section 2. Hazard identification

|                                               |                                                                                                                                                                                              |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification of the substance<br>or mixture | : FLAMMABLE LIQUIDS - Category 3<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B<br>REPRODUCTIVE TOXICITY - Category 1B<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

GHS label elements  
Hazard pictograms

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal word                                   | : Danger                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Hazard statements                             | : H225 - Flammable liquid and vapor.<br>H320 - Causes eye irritation.<br>H360 - May damage the unborn child.<br>H371 - May cause damage to organs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <u>Precautionary statements</u><br>Prevention | : P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.<br>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor.<br>P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.                                                                                                                                                                                                                                                                              |
| Response                                      | : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or physician.<br>P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P361+P364 + P352 + P312 + P362+P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.<br>P332 + P313 - If skin irritation occurs: Get medical attention. |

## SAFRANINE O - FOR GRAM STAIN

## Section 2. Hazard identification

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

## Storage

: P403 + P235 - Store in a well-ventilated place. Keep cool.

## Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Section 3. Composition/information on ingredients

## Substance/mixture

: Mixture

## Other means of identification

: Not available.

| Ingredient name | % (w/w)   | CAS number |
|-----------------|-----------|------------|
| Ethanol         | 3.0 - 7.0 | 64-17-5    |
| Methanol        | 0.5 - 1.5 | 67-56-1    |
| Ethyl acetate   | 0.1 - 1   | 141-78-6   |
| Safranin O      | 0.1 - 1   | 477-73-6   |

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

Description of necessary first aid measuresEye contact:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact:

Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## SAFRANINE O - FOR GRAM STAIN

## Section 4. First-aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

|              |                                                       |
|--------------|-------------------------------------------------------|
| Eye contact  | : Causes eye irritation.                              |
| Inhalation   | : May be harmful if inhaled.                          |
| Skin contact | : Toxic in contact with skin. Causes skin irritation. |
| Ingestion    | : May be harmful if swallowed.                        |

#### Over-exposure signs/symptoms

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Eye contact  | : Adverse symptoms may include the following: pain or irritation<br>watering redness |
| Inhalation   | : No known significant effects or critical hazards.                                  |
| Skin contact | : Adverse symptoms may include the following:<br>Irritation<br>redness               |
| Ingestion    | : No known significant effects or critical hazards.                                  |

#### Indication of immediate medical attention and special treatment needed, if necessary

|                            |                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes to physician         | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.                                                                                                                                                                                                                                                                         |
| Specific treatments        | : No specific treatment.                                                                                                                                                                                                                                                                                                                                                                            |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

|                                                |                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.                                                                                                                                                                                                                                                     |
| Unsuitable extinguishing media                 | : Do not use water jet or water-based fire extinguishers.                                                                                                                                                                                                                                                            |
| Specific hazards arising from the chemical     | : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.                                                                                               |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide                                                                                                                                                                                                                   |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.                                                                                                                                                |

## SAFRANINE O - FOR GRAM STAIN

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## SAFRANINE O - FOR GRAM STAIN

## Section 8. Exposure controls/personal protection

[Control parameters](#)[Occupational exposure limits](#)

| Ingredient name | Exposure limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethanol         | <b>CA Alberta Provincial (Canada, 4/2009).</b><br>8 hrs OEL: 1000 ppm 8 hours.<br>8 hrs OEL: 1880 mg/m <sup>3</sup> 8 hours.<br><b>CA British Columbia Provincial (Canada, 6/2017).</b><br>STEL: 1000 ppm 15 minutes.<br><b>CA Ontario Provincial (Canada, 1/2018).</b><br>STEL: 1000 ppm 15 minutes.<br><b>CA Quebec Provincial (Canada, 1/2014).</b><br>TWAEV: 1000 ppm 8 hours.<br>TWAEV: 1880 mg/m <sup>3</sup> 8 hours.<br><b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br>STEL: 1250 ppm 15 minutes.<br>TWA: 1000 ppm 8 hours.                                                                                                                                                                                                                                                                                                                          |
| Methanol        | <b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b><br>8 hrs OEL: 262 mg/m <sup>3</sup> 8 hours.<br>8 hrs OEL: 200 ppm 8 hours.<br>15 min OEL: 250 ppm 15 minutes.<br>15 min OEL: 328 mg/m <sup>3</sup> 15 minutes.<br><b>CA British Columbia Provincial (Canada, 6/2017). Absorbed through skin.</b><br>TWA: 200 ppm 8 hours.<br>STEL: 250 ppm 15 minutes.<br><b>CA Ontario Provincial (Canada, 1/2018). Absorbed through skin.</b><br>TWA: 200 ppm 8 hours.<br>STEL: 250 ppm 15 minutes.<br><b>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.</b><br>TWAEV: 200 ppm 8 hours.<br>TWAEV: 262 mg/m <sup>3</sup> 8 hours.<br>STEV: 250 ppm 15 minutes.<br>STEV: 328 mg/m <sup>3</sup> 15 minutes.<br><b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b><br>STEL: 250 ppm 15 minutes.<br>TWA: 200 ppm 8 hours. |
| Ethyl acetate   | <b>CA Alberta Provincial (Canada, 4/2009).</b><br>8 hrs OEL: 1440 mg/m <sup>3</sup> 8 hours.<br>8 hrs OEL: 400 ppm 8 hours.<br><b>CA British Columbia Provincial (Canada, 6/2017).</b><br>TWA: 150 ppm 8 hours.<br><b>CA Ontario Provincial (Canada, 1/2018).</b><br>TWA: 400 ppm 8 hours.<br><b>CA Quebec Provincial (Canada, 1/2014).</b><br>TWAEV: 400 ppm 8 hours.<br>TWAEV: 14 mg/m <sup>3</sup> 8 hours.<br>STEV: 40 ppm 15 minutes.<br><b>CA Saskatchewan Provincial (Canada, 7/2013).</b><br>STEL: 500 ppm 15 minutes.<br>TWA: 400 ppm 8 hours.                                                                                                                                                                                                                                                                                                              |

[Appropriate engineering controls](#)

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

[Environmental exposure controls](#)

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

[Individual protection measures](#)[Hygiene measures](#)

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that

## SAFRANINE O - FOR GRAM STAIN

## Section 8. Exposure controls/personal protection

eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection****Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

**Appearance****Physical state**

: Liquid.

**Color**

: Not available.

**Odor**

: Alcohol.

**Odor threshold**

: Not available.

**pH**

: Not available.

**Melting point**

: Not available.

**Boiling point**

: Not available.

**Flash point**

: Closed cup: 46°C (115°F) [Tagliabue.]

**Evaporation rate**

: Not available.

**Flammability (solid, gas)**

: Not available.

**Lower and upper explosive (flammable) limits**

: Not available.

**Vapor pressure**

: Not available.

**Vapor density**

: Not available.

**Relative density**

: 0.990 @ 20°C (68 °F).

**Solubility**

: Completely soluble in water.

**Partition coefficient: n-octanol/water**

: Not available.

## SAFRANINE O - FOR GRAM STAIN

## Section 9. Physical and chemical properties

|                           |                  |
|---------------------------|------------------|
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| Viscosity                 | : Not available. |
| Flow time (ISO 2431)      | : Not available. |

## Section 10. Stability and reactivity

|                                    |                                                                                                                                                                           |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : No specific test data related to reactivity available for this product or its ingredients.                                                                              |
| Chemical stability                 | : The product is stable.                                                                                                                                                  |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.                                                                                         |
| Conditions to avoid                | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials             | : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.                                                                          |
| Hazardous decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.                                                                    |

## Section 11. Toxicological information

Information on toxicological effectsAcute toxicity

| Product/ingredient name | Result                | Species | Dose                     | Exposure |
|-------------------------|-----------------------|---------|--------------------------|----------|
| Ethanol                 | LC50 Inhalation Vapor | Rat     | 124700 mg/m <sup>3</sup> | 4 hours  |
|                         | LD50 Oral             | Rat     | 7 g/kg                   | -        |
| Methanol                | LC50 Inhalation Gas.  | Rat     | 145000 ppm               | 1 hours  |
|                         | LC50 Inhalation Gas.  | Rat     | 64000 ppm                | 4 hours  |
|                         | LD50 Dermal           | Rabbit  | 15800 mg/kg              | -        |
|                         | LD50 Oral             | Rat     | 5600 mg/kg               | -        |
| Ethyl acetate           | LD50 Oral             | Rat     | 5620 mg/kg               | -        |

Irritation/Corrosion

| Product/ingredient name | Result                   | Species | Score | Exposure           | Observation |
|-------------------------|--------------------------|---------|-------|--------------------|-------------|
| Ethanol                 | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 mg    | -           |
|                         | Eyes - Moderate irritant | Rabbit  | -     | 0.066666667minutes | -           |
|                         |                          |         |       | 100 mg             |             |
|                         | Eyes - Moderate irritant | Rabbit  | -     | 100 µl             | -           |
|                         | Eyes - Severe irritant   | Rabbit  | -     | 500mg              | -           |
|                         | Skin - Mild irritant     | Rabbit  | -     | 400mg              | -           |

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

## SAFRANINE O - FOR GRAM STAIN

## Section 11. Toxicological information

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

| Name                      | Category                 | Target organs                      |
|---------------------------|--------------------------|------------------------------------|
| Methanol<br>Ethyl acetate | Category 1<br>Category 3 | Not determined<br>Narcotic effects |

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard.

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

**Eye contact** : Causes eye irritation.

**Inhalation** : May be harmful if inhaled.

**Skin contact** : Toxic in contact with skin. Causes skin irritation.

**Ingestion** : May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposureShort term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

## SAFRANINE O - FOR GRAM STAIN

## Section 11. Toxicological information

Potential chronic health effects

|                              |                                                     |
|------------------------------|-----------------------------------------------------|
| <b>General</b>               | : No known significant effects or critical hazards. |
| <b>Carcinogenicity</b>       | : No known significant effects or critical hazards. |
| <b>Mutagenicity</b>          | : No known significant effects or critical hazards. |
| <b>Teratogenicity</b>        | : No known significant effects or critical hazards. |
| <b>Developmental effects</b> | : No known significant effects or critical hazards. |
| <b>Fertility effects</b>     | : No known significant effects or critical hazards. |

Numerical measures of toxicityAcute toxicity estimates

There is no data available.

## Section 12. Ecological information

Toxicity

| Product/ingredient name | Result                                | Species                               | Exposure |
|-------------------------|---------------------------------------|---------------------------------------|----------|
| Ethanol                 | Acute EC50 1074 mg/L Fresh water      | Crustaceans - Cypris subglobosa       | 48 hours |
|                         | Acute LC50 5680 mg/L Fresh water      | Daphnia - Daphnia magna - Neonate     | 48 hours |
|                         | Acute LC50 11000000 µg/L Marine water | Fish - Alburnus alburnus              | 96 hours |
|                         | Chronic NOEC 4.995 mg/L Marine water  | Algae - Ulva pertusa                  | 96 hours |
|                         | Chronic NOEC 100 µl/L Fresh water     | Daphnia - Daphnia magna - Neonate     | 21 days  |
| Methanol                | Chronic NOEC 0.375 µl/L Fresh water   | Fish - Gambusia holbrooki - Larvae    | 12 weeks |
|                         | Acute LC50 2500000 µg/L Marine water  | Crustaceans - Crangon crangon - Adult | 48 hours |
|                         | Acute LC50 3289 mg/L Fresh water      | Daphnia - Daphnia magna - Neonate     | 48 hours |
| Ethyl acetate           | Acute LC50 290 mg/L Fresh water       | Fish - Danio rerio - Egg              | 96 hours |
|                         | Acute EC50 2500000 µg/L Fresh water   | Algae - Selenastrum sp.               | 96 hours |
|                         | Acute LC50 750000 µg/L Fresh water    | Crustaceans - Gammarus pulex          | 48 hours |
|                         | Acute LC50 154000 µg/L Fresh water    | Daphnia - Daphnia cucullata           | 48 hours |
|                         | Acute LC50 212500 µg/L Fresh water    | Fish - Heteropneustes fossilis        | 96 hours |
|                         | Chronic NOEC 2400 µg/L Fresh water    | Daphnia - Daphnia magna               | 21 days  |
|                         | Chronic NOEC 75.6 mg/L Fresh water    | Fish - Pimephales promelas - Embryo   | 32 days  |

Persistence and degradability

There is no data available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-----|-----------|
| Ethanol                 | -0.35  | -   | low       |
| Methanol                | -0.77  | <10 | low       |
| Ethyl acetate           | 0.68   | 30  | low       |

Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## SAFRANINE O - FOR GRAM STAIN

## Section 13. Disposal considerations

**Disposal methods**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                            | TDG Classification                                                                      | IMDG                                                                                     | IATA                                                                                      |
|----------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| UN number                  | UN1993                                                                                  | UN1993                                                                                   | UN1993                                                                                    |
| UN proper shipping name    | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                         | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                          | FLAMMABLE LIQUID, N.O.S.<br>(Ethanol, Methanol)                                           |
| Transport hazard class(es) | 3<br> | 3<br> | 3<br> |
| Packing group              | III                                                                                     | III                                                                                      | III                                                                                       |
| Environmental hazards      | No.                                                                                     | No.                                                                                      | No.                                                                                       |

**Additional information****TDG Classification**

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

**IMDG**

: **Emergency schedules** F-E, S-D

**Emergency Response**

: 131

**Special precautions for user**

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

**Canadian lists****Canada inventory (DSL NDSL)**

: All components are listed or exempted.

**Canadian NPRI**

: The following components are listed: Ethanol; Methanol; Ethyl acetate.

**CEPA Toxic substances**

: None of the components are listed.

## SAFRANINE O - FOR GRAM STAIN

## Section 16. Other information

Procedure used to derive the classification

| Classification                                                                                                                                                                             | Justification                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| FLAMMABLE LIQUIDS - Category 3<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B<br>REPRODUCTIVE TOXICITY - Category 1B<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method |

History

Date of issue : 10-10-2025

Date of previous issue : Not applicable.

Version : 3

Prepared by : ChapTec

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations  
HPR = Hazardous Products Regulations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above- named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.