SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
- Trade name: Gram's Crystal Violet
- Alternative number(s): S012

1.2 Relevant identified uses of the substance or mixture and uses advised against
- Relevant identified uses: Laboratory Chemicals, Analytical Purpose, Bio-chemical Analysis, For InVitro Diagnostic Use

1.3 Details of the supplier of the safety data sheet
- HiMedia Laboratories Pvt. Ltd.
- Plot No. C40, Road No. 21Y, Wagle Industrial Area, MIDC
- Thane West Maharashtra 400604
- India
- Telephone: +91 22 69034800, +91 22 61169797
- e-mail: info@himedialabs.com
- Website: www.himedialabs.com
- e-mail (competent person): info@himedialabs.com (HiMedia Laboratories Pvt. Ltd)

1.4 Emergency telephone number
- Emergency information service: This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification acc. to GHS

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Category</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>flammable liquid</td>
<td>3</td>
<td>Flam. Liq. 3</td>
<td>H226</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>2</td>
<td>Eye Irrit. 2</td>
<td>H319</td>
</tr>
<tr>
<td>3.6</td>
<td>carcinogenicity</td>
<td>2</td>
<td>Carc. 2</td>
<td>H351</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>2</td>
<td>Aquatic Chronic 2</td>
<td>H411</td>
</tr>
</tbody>
</table>

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
- The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements
- Labelling
  - Signal word: warning
  - Pictograms: GHS02, GHS07, GHS08, GHS09

United Kingdom: en
Safety Data Sheet
acc. to Regulation (EC) No. 1907/2006 (REACH)

Gram's Crystal Violet

Hazard statements
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to industrial combustion plant.

Hazardous ingredients for labelling
Crystal violet

Other hazards of no significance

SECTION 3: Composition/information on ingredients

3.1 Substances
Not relevant (mixture)

3.2 Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Identifier</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
</tr>
</thead>
</table>
| Ethanol anhydrous | CAS No 64-17-5 | 10 – < 25 | Flam. Liq. 2 / H225  
Eye Irrit. 2 / H319 |
|                   | EC No 200-578-6 |   |   |
| Crystal violet    | CAS No 548-62-9 | 1 – < 5 | Acute Tox. 4 / H302  
Eye Dam. 1 / H318  
Carc. 1B / H350  
Aquatic Acute 1 / H400  
Aquatic Chronic 1 / H410 |
|                   | EC No 208-953-6 |   |   |
|                   | Index No 612-205-00-8 |   |   |
| Ammonium oxalate,monohydrate | CAS No 6009-70-7 | < 1 | Acute Tox. 4 / H302  
Acute Tox. 4 / H312 |

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Specific Conc. Limits</th>
<th>M-Factors</th>
<th>ATE</th>
<th>Exposure route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal violet</td>
<td>-</td>
<td>-</td>
<td>420 mg/kg</td>
<td>oral</td>
</tr>
<tr>
<td>Ammonium oxalate,monohydrate</td>
<td>-</td>
<td>-</td>
<td>500 mg/kg 1,100 mg/kg</td>
<td>oral dermal</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact
Wash with plenty of soap and water.

Following eye contact
Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion
Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media
Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products
Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Remove persons to safety.

For emergency responders
Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up
Advice on how to contain a spill
Covering of drains

Advice on how to clean up a spill
Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Recommendations
- Measures to prevent fire as well as aerosol and dust generation
Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details
Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene
Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities
Managing of associated risks
- Explosive atmospheres
Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.
- **Flammability hazards**
  Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- **Ventilation requirements**
  Use local and general ventilation. Ground/bond container and receiving equipment.

- **Specific designs for storage rooms or vessels**

- **Storage temperature**
  Recommended storage temperature: 10 – 30 °C

- **Packaging compatibilities**
  Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

---

**SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Ceiling-C [ppm]</th>
<th>Ceiling-C [mg/m³]</th>
<th>Notation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB</td>
<td>ethanol</td>
<td>64-17-5</td>
<td>WEL</td>
<td>1,000</td>
<td>1,920</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EH40/2005</td>
</tr>
</tbody>
</table>

**Notation**

- **Ceiling-C** ceiling value is a limit value above which exposure should not occur
- **STEL** short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
- **TWA** time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### 8.2 Exposure controls

**Appropriate engineering controls**

- General ventilation.

**Individual protection measures (personal protective equipment)**

- **Eye/face protection**
  - Wear eye/face protection.

- **Skin protection**
  - **Hand protection**
    - Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
  - **Other protection measures**
    - Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

- **Respiratory protection**
  - In case of inadequate ventilation wear respiratory protection.

- **Environmental exposure controls**
  - Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.
### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Purple coloured clear solution</td>
</tr>
<tr>
<td>Odour</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Boiling point or initial boiling point and boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>flammable liquid in accordance with GHS criteria</td>
</tr>
<tr>
<td>Lower and upper explosion limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>not determined</td>
</tr>
</tbody>
</table>

### Partition coefficient

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (log value)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
</tr>
</tbody>
</table>

### Density and/or relative density

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>information on this property is not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle characteristics</td>
<td>not relevant (liquid)</td>
</tr>
</tbody>
</table>

#### 9.2 Other information

United Kingdom: en
SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal violet</td>
<td>548-62-9</td>
<td>oral</td>
<td>420 mg/kg</td>
</tr>
<tr>
<td>Ammonium oxalate,monohydrate</td>
<td>6009-70-7</td>
<td>oral</td>
<td>500 mg/kg</td>
</tr>
<tr>
<td>Ammonium oxalate,monohydrate</td>
<td>6009-70-7</td>
<td>dermal</td>
<td>1,100 mg/kg</td>
</tr>
</tbody>
</table>
Skin corrosion/irritation  
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation  
Causes serious eye irritation.

Respiratory or skin sensitisation  
Shall not be classified as a respiratory or skin sensitisier.

Germ cell mutagenicity  
Shall not be classified as germ cell mutagenic.

Carcinogenicity  
Suspected of causing cancer.

Reproductive toxicity  
Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure  
Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure  
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard  
Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards  
There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity  
Toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol anhydrous</td>
<td>64-17-5</td>
<td>LC50</td>
<td>1,806 mg/l</td>
<td>aquatic invertebrates</td>
<td>10 d</td>
</tr>
<tr>
<td>Ethanol anhydrous</td>
<td>64-17-5</td>
<td>ErC50</td>
<td>675 mg/l</td>
<td>algae</td>
<td>4 d</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Degradability of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
<th>Method</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol anhydrous</td>
<td>64-17-5</td>
<td>oxygen depletion</td>
<td>69 %</td>
<td>5 d</td>
<td></td>
<td>ECHA</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential  
Data are not available.
Bioaccumulative potential of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>BCF</th>
<th>Log KOW</th>
<th>BOD5/COD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol anhydrous</td>
<td>64-17-5</td>
<td>-0.77</td>
<td>0.6211</td>
<td></td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Endocrine disrupting properties
None of the ingredients are listed.

12.7 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Waste treatment-relevant information
Solvent reclamation/regeneration.

Sewage disposal-relevant information
Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers-packagings
It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks
Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number
ADR/RID                UN 1170
IMDG-Code              UN 1170
ICAO-TI                UN 1170

14.2 UN proper shipping name
ADR/RID                ETHANOL SOLUTION
IMDG-Code              ETHANOL SOLUTION
ICAO-TI                Ethanol solution

14.3 Transport hazard class(es)
ADR/RID                3
IMDG-Code              3
ICAO-TI                3
14.4 Packing group
ADR/RID II
IMDG-Code II
ICAO-TI II

14.5 Environmental hazards
hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment) Crystal violet

14.6 Special precautions for user
Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments
The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations
Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information
Classification code F1
Danger label(s) 3, fish and tree

Environmental hazards yes (hazardous to the aquatic environment)
Special provisions (SP) 144, 601
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
Transport category (TC) 2
Tunnel restriction code (TRC) D/E
Hazard identification No 33
Emergency Action Code 2YE

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information
Classification code F1
Danger label(s) 3, fish and tree

Environmental hazards yes (hazardous to water)
Special provisions (SP) 144, 601
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
Transport category (TC) 2
Hazard identification No 33
Gram's Crystal Violet

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

Deco-Paint Directive

| VOC content | 22.8 % |

Industrial Emissions Directive (IED)

| VOC content | 22.8 % |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Listed in</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol anhydrous</td>
<td></td>
<td>a)</td>
<td></td>
</tr>
<tr>
<td>Crystal violet</td>
<td></td>
<td>a)</td>
<td></td>
</tr>
</tbody>
</table>
**Legend**

A) Indicative list of the main pollutants

**Regulation on persistent organic pollutants (POP)**
None of the ingredients are listed.

**National inventories**

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>all ingredients are listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>not all ingredients are listed</td>
</tr>
</tbody>
</table>

**15.2 Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms**

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute hazard</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic hazard</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
<tr>
<td>BOD</td>
<td>Biochemical Oxygen Demand</td>
</tr>
<tr>
<td>Carc.</td>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>Ceiling-C</td>
<td>Ceiling value</td>
</tr>
<tr>
<td>COD</td>
<td>Chemical oxygen demand</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>ErC50</td>
<td>≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control</td>
</tr>
</tbody>
</table>
**Safety Data Sheet**  
acc. to Regulation (EC) No. 1907/2006 (REACH)

**Gram's Crystal Violet**

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam.</td>
<td>Seriously damaging to the eye</td>
</tr>
<tr>
<td>Eye Irrit.</td>
<td>Irritant to the eye</td>
</tr>
<tr>
<td>Flam. Liq.</td>
<td>Flammable liquid</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>ICAO-TI</td>
<td>Technical instructions for the safe transport of dangerous goods by air</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>IMDG-Code</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>index No</td>
<td>The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50% lethality during a specified time interval</td>
</tr>
<tr>
<td>log KOW</td>
<td>n-Octanol/water</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TWA</td>
<td>Time-weighted average</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>WEL</td>
<td>Workplace exposure limit</td>
</tr>
</tbody>
</table>

**Key literature references and sources for data**


**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture. Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
### List of relevant phrases (code and full text as stated in section 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.