Section 1. Chemical Product and Company Identification

Product No. R40240
Trade name Gram Stain Enhanced Kit
Manufacturer REMEL Inc.
12076 Santa Fe Drive
P.O. Box 14428
Lenexa
Kansas KS 66215
U.S.A.
Tel: (+1) 913 888 0939
Fax: (+1) 913 895 4128
Emergency: Chemtrec USA 800-424-9300

Supplier OXOID LIMITED
Wade Road
Basingstoke
Hants
RG24 8PW
Tel: + 44 1256 841144

Section 2. Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Concentration</th>
<th>Classification</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENHANCED GRAM CRYSTAL VIOLET (R40225)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>8.00 % v/v</td>
<td>F - Highly flammable.</td>
<td>R11- Highly flammable.</td>
</tr>
<tr>
<td></td>
<td>200-578-6</td>
<td>548-82-9</td>
<td>Xi - Irritant.</td>
<td>R41- Risk of serious damage to eyes.</td>
</tr>
<tr>
<td>Crystal Violet SS</td>
<td>208-953-6</td>
<td>&lt; 1.00 w/v</td>
<td>Xn - Harmful.</td>
<td>R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
</tr>
<tr>
<td>ENHANCED GRAM DECOLORIZER (R40228)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>57.00 % v/v</td>
<td>F - Highly flammable.</td>
<td>R11- Highly flammable.</td>
</tr>
<tr>
<td></td>
<td>200-578-6</td>
<td>67-64-1</td>
<td>F - Highly flammable.</td>
<td>R36- Irritating to eyes.</td>
</tr>
<tr>
<td>Acetone</td>
<td>200-662-2</td>
<td>40.00 % v/v</td>
<td>Xi - Irritant.</td>
<td>R66- Repeated exposure may cause skin dryness or cracking.</td>
</tr>
<tr>
<td>ENHANCED GRAM IODINE (R40234)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iodine</td>
<td>7553-56-2</td>
<td>0.33 % w/v</td>
<td>Xn - Harmful.</td>
<td>R20/21- Harmful by inhalation and in contact with skin.</td>
</tr>
<tr>
<td></td>
<td>231-442-4</td>
<td></td>
<td>N - Dangerous to the Environment.</td>
<td>R50- Very toxic to aquatic organisms.</td>
</tr>
<tr>
<td>ENHANCED GRAM SAFRANIN (R40237)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>2.00 % v/v</td>
<td>F - Highly flammable.</td>
<td>R11- Highly flammable.</td>
</tr>
<tr>
<td></td>
<td>200-578-6</td>
<td>477-73-6</td>
<td>Xi - Irritant.</td>
<td>R41- Risk of serious damage to eyes.</td>
</tr>
<tr>
<td>Safranin O</td>
<td>207-518-8</td>
<td>&lt; 1.00 % w/v</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAM ENHANCER (R40231)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>&lt; 1.00 % v/v</td>
<td>Carc. Cat. 3</td>
<td>R40- Limited evidence of a carcinogenic effect.</td>
</tr>
<tr>
<td></td>
<td>200-001-8</td>
<td></td>
<td>T - Toxic.</td>
<td>R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C - Corrosive.</td>
<td>R34- Causes burns.</td>
</tr>
</tbody>
</table>
Section 3. Hazards Identification

Most Important Hazards

ENHANCED GRAM CRYSTAL VIOLET (R40225)
Flammable.

ENHANCED GRAM DECOLORIZER (R40228)
Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

ENHANCED GRAM IODINE (R40234)
Not classified as hazardous.

ENHANCED GRAM SAFRANIN (R40237)
Not classified as hazardous.

GRAM ENHANCER (R40231)
May cause sensitization by skin contact.

Section 4. First Aid Measures

First Aid - Eyes
Check for and remove any contact lenses. In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention.

First Aid - Skin
After contact with skin, wash immediately with a copious amount of water. Obtain medical attention if soreness or redness persists.

First Aid - Ingestion
Have victim drink 1-3 glasses of water to dilute stomach contents. Seek immediate medical attention.

First Aid - Inhalation
If inhaled, remove to fresh air. Seek medical attention if you feel unwell.

Section 5. Fire Fighting Measures

Extinguishing Media - Suitable
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Section 6. Accidental Release Measures

Personal Precautions
Wear suitable gloves and eye/face protection.

Spill
Absorb with dry earth, sand or other noncombustible material.
SAFETY DATA SHEET
Gram Stain Enhanced Kit

Date of issue - 19/02/2007.  R40240

Section 7. Handling and Storage

Handling
Keep away from heat. Keep away from sources of ignition. Do not breathe gas/fumes/vapour/spray.

Storage
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

Engineering measures
Good general ventilation should be sufficient to control airborne levels.

Protective Measures - Respiratory
A respirator is not needed under normal and intended conditions of product use.

Protective Measures - Hands
Nitrile gloves.

Protective Measures - Eyes
Safety glasses or chemical goggles to EN166, 167 and 168.

Protective Measures - Body
Lab coat.

Section 9. Physical and Chemical Properties

Physical state
Liquid.

Colour
ENHANCED GRAM CRYSTAL VIOLET (R40225) - Violet.
ENHANCED GRAM DECOLORIZER (R40228) - Colourless.
ENHANCED GRAM IODINE (R40234) - Yellowish-brown.
ENHANCED GRAM SAFRANIN (R40237) - Red.
GRAM ENHANCER (R40231) - Green.

Section 10. Stability and Reactivity

Stability
The product is stable.

Conditions to Avoid
Avoid all possible sources of ignition (spark or flame).

Hazardous decomposition products
carbon oxides (CO, CO2)

Section 11. Toxicological Information

Acute toxicity
Low order of acute toxicity,
Oral LD50 (rat) > 2000 mg/kg.
Dermal LD50 (rabbit) > 2000 mg/kg.
Inhalation LC50 (rat) > 20 mg/litre/4h.

Eye irritation
Hazardous in case of eye contact (irritant).

Sensitization - Skin
May cause skin sensitization.

Section 12. Ecological Information

Ecotoxicity
No relevant studies identified.

Section 13. Disposal Considerations

Disposal considerations
Waste must be disposed of in accordance with federal, state and local environmental control regulations.
### Section 14. Transport Information

- **UN:** UN number 1993
- **UN:** Proper shipping name Flammable liquid, n.o.s. (Ethanol, acetone).
- **UN:** Class 3
- **UN:** Packing group II

### Section 15. Regulatory Information

**Label Requirements**
- Highly flammable, Irritant

**Risk Phrases**
- R11- Highly flammable.
- R36- Irritating to eyes.
- R43- May cause sensitization by skin contact.
- R66- Repeated exposure may cause skin dryness or cracking.
- R67- Vapours may cause drowsiness and dizziness.

**Safety Phrases**
- S16- Keep away from sources of ignition - No smoking.
- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37- Wear suitable protective clothing and gloves.
- S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**TSCA**
- Listed on inventory.

**DSL (Canada)**
- Listed on inventory.

**EC Classification**
- F - Highly flammable. Xi - Irritant.

**WHMIS (Classification)**
- WHMIS Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

### Section 16. Other Information

**MSDS first issued**
- 19/02/2007

**Notes**
- Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use.

- Labelling of packaging containing less than 125 ml will differ according to the EU preparations Directive 1999/45/EC.