1  Identification of the substances/ mixture and of the company/ undertaking

1.1  Product Identifiers

Product Number   R024
Product Name     o-Toluidine Reagent
REACH Registration Number  This product is a mixture. Reach registration number is not available for this mixture.

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

1.2.1  Relevant identified uses

Laboratory Chemicals, Analytical Purpose, Biochemical Analysis
For InVitro Diagnostic Use

1.3  Details of the supplier of the safety data sheet

Produced by HiMedia Laboratories Private Limited
Address 23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086 India
Tel. No. +91-22-2500 0970, +91-22-2500 1607 Fax No.: +91-22-25002468
Mail Id info@himedialabs.com Website: www.himedialabs.com

1.4  Emergency Tel. No.

Emergency Tel. No. Please contact the regional HiMedia representation in your country

2  Hazards Identification

2.1  Classification of the substance or mixture

CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]
Flammable liquids, (Category 3), H226
Acute toxicity, Oral, (Category 4), H302
Skin corrosion or irritation, (Category 1A), H314
Carcinogenicity, (Category 1B), H350
Hazardous to the aquatic environment, acute hazard, (Category 1), H400

2.2  Labeling according to Regulation (EC) No.1272/2008

Pictogram
Signal word  Danger

Hazard Statement(s)
H226 Flammable liquid and vapour
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H350 May cause cancer
H400 Very toxic to aquatic life
Precautionary Statement(s)

P201 Obtain special instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minute. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308 IF exposed or concerned:
P313 Get medical advice/attention.

2.3 Other Hazards
None

3 Composition/Information On Ingredients

3.2 Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiourea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No.: 62-56-6</td>
<td>EC No.: 200-543-5</td>
<td></td>
</tr>
<tr>
<td>Index-No: 612-082-00-0</td>
<td></td>
<td>As Per EC Regulation 1272/2008</td>
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<tr>
<td></td>
<td></td>
<td>H302; H351; H361d; H411</td>
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<tr>
<td>Glacial acetic acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No.: 64-19-7</td>
<td>EC No.: 200-580-7</td>
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<tr>
<td>Index-No: 607-002-00-6</td>
<td></td>
<td>As Per EC Regulation 1272/2008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flam. Liq. 3; Skin Corr. 1A</td>
</tr>
<tr>
<td>o-Toluidine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No.: 95-53-4</td>
<td></td>
<td>As Per EC Regulation 1272/2008</td>
</tr>
</tbody>
</table>
4 First Aid Measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash with plenty of soap and water. Consult a physician.

In case of eye contact
Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed
No data available.

5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Sulphur oxides

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information
No data available.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature: On receipt store between 10-30°C

7.3 Specific end uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the products.

Personal protective equipment

Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

Eye/face protection
Tightly fitting safety goggles; Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls
Do not empty into drains.
9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Light yellow clear liquid
- Odour: No data available
- Odour Threshold: No data available
- pH: No data available
- Melting/freezing point: No data available
- Initial boiling point and boiling range: No data available
- Flash point: No data available
- Flammability (Solid, gas): No data available
- Vapour pressure: No data available
- Relative density: No data available
- Water Solubility: No data available
- Partition coefficient: n-octanol/water: No data available
- Autoignition Temperature: No data available
- Viscosity: No data available
- Explosive properties: No data available
- Oxidizing properties: No data available
- Vapour density: No data available
- Thermal decomposition: No data available

9.2 Other safety information

No data available

10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Refer Section 5.2

11 Toxicological Information

11.1 Information on toxicological effects

- Acute toxicity
  No data available
- Skin corrosion/irritation
  No data available
- Serious eye damage/eye irritation
  No data available
No data available

**Respiratory or skin sensitisation**
No data available

**Carcinogenicity**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Potential Health Effects**

**Inhalation**
REFER SECTION II

**Skin**
REFER SECTION II

**Eyes**
REFER SECTION II

**Ingestion**
REFER SECTION II

### 11.2 Components

**Thiourea**
Acute oral toxicity
Rat LD50: ca. 1 750 mg/kg (As per OECD Guideline 401)
Acute inhalation toxicity
Rat LC50: >= 170 mg/m³ air (As per OECD Guideline 403)
Acute dermal toxicity
Rat LD50: > 6 810 mg/kg (As per OECD Guideline 402)
Skin irritation
Irritant (ECHA)
Eye irritation
Rabbit Result: Moderately irritation (ECHA)
Sensitisation
Guinea pig maximisation test
Result: Not sensitizing (As per OECD Guideline 406)
Genetic toxicity (in-vitro)
No data available
Genetic toxicity (in-vivo)
Micronucleus assay Result: Negative
Carcinogenicity
No data available
Toxicity to Reproduction
No data available
Teratogenicity
No data available
**Additional information:**
RTECS: YU2800000

**Glacial acetic acid**

*Acute oral toxicity*
Mouse LD50: 4,960 mg/kg (ECHA)

*Skin irritation*
Rabbit Result: Irritations (As Per OECD Test Guideline 404)

*Eye irritation*
Rabbit Result: Irritant (As Per OECD Test Guideline 405)

*Sensitisation*
No data available

*Ames test*
Salmonella Typhimurium
Result: Negative (As Per OECD Test Guideline 471)

*Mutagenicity (mammal cell test)*
Micronucleus assay
Result: Negative (As Per EU Method B.12)

*Carcinogenicity*
No data available

*Toxicity to Reproduction*
No data available

*Teratogenicity*
No data available

**Additional information:**
RTECS AF1225000

**o-toluidine**

*Acute oral toxicity*
Rabbit LD50: 840 mg/kg (ECHA)

*Acute inhalation toxicity*
No data available

*Acute dermal toxicity*
Rabbit LD50: 3,250 mg/kg (ECHA)

*Acute intraperitoneal toxicity*
Mouse LD50: 113 mg/kg

*Skin irritation*
Rabbit Result: Irritant (ECHA)

*Eye irritation*
Rabbit Result: Irreversible effects on the eye (ECHA)

*Sensitisation*
Patch test
Guinea pig Result: Sensitising

*Genetic toxicity (in-vitro)*
Comet assay Result: Positive (ECHA)
Genetic toxicity (in-vivo)
No data available
Carcinogenicity
No data available
Toxicity to Reproduction
No data available
Teratogenicity
No data available

Additional information:
RTECS: XU2975000

12 Ecological Information
12.1 Toxicity

Components:
Thiourea
Toxicity to fish
Poecilia reticulate (Static test) LC50: 5g/L (ECHA)
Toxicity to aquatic invertebrates
Daphnia magna LC50: 1.8 mg/L; 96h (ECHA)
Toxicity to aquatic algae and cyanobacteria
Desmodesmus subspicatus (Static test) EC50: >= 3.8-<= 5.4 mg/L; 96h
Toxicity to microorganisms
Pseudomonas putida (Static test) TT: 1,265.4 mg/L; 18h

Components:
Glacial acetic acid
Toxicity to fish
Oncorhyncus mykiss (Rainbow trout) LC50: 108 mg/L; 96h (As per OECD Guideline 203)
Toxicity to aquatic invertebrates
Daphnia magna (Water flea) EC50: 79.5 mg/L; 48h (As per OECD Guideline 202)
Toxicity to aquatic algae and cyanobacteria
Skeletonoma costatum EC50: >300.82 mg/L; 72h (As per ISO 10253)

Components:
o-toluidine
Toxicity to fish
Leuciscus idus melanotus (Static test) LC50: 117 mg/L; 48h
Oryzias latipes (Flow-through test) LC50: > 100 mg/L; 21d (As per OECD Guideline 204)
Toxicity to aquatic invertebrates
Daphnia magna LC50: 26 mg/L (ECHA)
Toxicity to aquatic algae and cyanobacteria
Chlorella pyrenoidosa (Static test) EC50: 55 mg/L; 96h (As per OECD Guideline 201)
Toxicity to microorganisms
Spirostomum ambiguum LC50: 5,411 mg/L; 24h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
This preparation contains no substance considered to be persistent, bioaccumulating or toxic (PBT) at levels of 0.1% or higher.

12.6 Other adverse effects
Discharge into the environment must be avoided.

13 Disposal Considerations

13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose off this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information

14.1 UN-No
ADNR : 2920 ADR : 2920 IATA_C : 2920 IATA_P : 2920 IMDG : 2920 RID : 2920

14.2 UN proper shipping name
ADNR : Corrosive liquids, flammable, n.o.s.
ADR : Corrosive liquids, flammable, n.o.s.
IATA_C : Corrosive liquids, flammable, n.o.s.
IATA_P : Corrosive liquids, flammable, n.o.s.
IMDG : Corrosive liquids, flammable, n.o.s.
RID : Corrosive liquids, flammable, n.o.s.

14.3 Transport hazard class(es)
ADNR : 8 ADR : 8 IATA_C : 8 IATA_P : 8 IMDG : 8 RID : 8

14.4 Packaging group

14.5 Environmental hazards
ADNR : NO ADR : NO IMDG : Marine pollutant: NO IATA_C : NO IATA_P : NO RID : NO

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety datasheet complies with the requirements of Regulation(EC) No. 1907/2006.

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
### 16 Other information

Text of H codes and classification mentioned in section 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</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>H361d</td>
<td>Suspected of damaging the unborn child</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquids, Category 3</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion or irritation, Category 1A</td>
</tr>
</tbody>
</table>

### Further Information

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The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal. The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.