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

1.1  Product Identifiers
- Product Number: R036
- Product Name: TDA 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

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
- Mail Id: info@himedialabs.com
- Fax No.: +91-22-25002468
- 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]
- Corrosive to metals, (Category 1), H290
- Skin corrosion or irritation, (Category 2), H315
- Serious eye damage or eye irritation, (Category 1), H318
- Hazardous to the aquatic environment, long term hazard, (Category 2), H411

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

Pictogram
- Signal word: Danger

Hazard Statement(s)
- H290: May be corrosive to metals
- H315: Causes skin irritation
- H318: Causes serious eye damage
- H411: Toxic to aquatic life with long lasting effects

Precautionary Statement(s)
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P390 Absorb spillage to prevent material damage.
P273 Avoid release to the environment.
P391 Collect spillage.
P302 + P352 IF ON SKIN: wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

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>Ferric chloride</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=10 - &lt;=20%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>7705-08-0</td>
<td></td>
</tr>
<tr>
<td>EC No. :</td>
<td>231-729-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Met. Corr. 1; Acute Tox. oral 4; Skin Irrit. 2; Eye Dam. 1 H290; H302; H315; H318</td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes & classification.

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
Nature of decomposition products unknown

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*
*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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow coloured clear solution</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**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 Toxico logical Information
11.1 Information on toxicological effects

Acute toxicity
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

Ferric chloride

Acute oral toxicity
Rat LD50: 3,200mg/kg (As per OECD Guideline 401)
Acute inhalation toxicity
No data available
Acute dermal toxicity
Rabbit LD50: > 559mg/kg (As per EPA OPP 81-2)
Skin irritation
Rabbit Result: Non Irritant (As per OECD Guideline 404)
Eye irritation
Rabbit Result: Irreversible effects on the eye (ECHA)
Sensitisation
Guinea pig Result: Not sensitising
Genetic toxicity (in-vitro)
Mammalian cell gene mutation assay
Mouse lymphoma cells Result : Negative
Genetic toxicity (in-vivo)
Mouse Result: Positive (ECHA)
Carcinogenicity
No data available
Toxicity to Reproduction
No data available
Teratogenicity
No data available

Additional information:
RTECS: LJ9100000

12 Ecological Information
12.1 Toxicity
Components:
Ferric chloride
Toxicity to microorganisms
Activated sludge IC50: ca. 170 mg/L (ECHA)

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 : 2582  ADR : 2582  IATA_C : 2582  IATA_P : 2582  IMDG : 2582  RID : 2582

14.2 UN proper shipping name
ADNR : Ferric chloride, solution
ADR : Ferric chloride, solution
IATA_C : Ferric chloride, solution
IATA_P : Ferric chloride, solution
IMDG : Ferric chloride, solution
RID : Ferric chloride, solution

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
No data available

15.2 Chemical Safety Assessment
No data available

16 Other information
Text of H codes and classification mentioned in section 3
H290  May be corrosive to metals
H302  Harmful if swallowed
H315  Causes skin irritation
H318  Causes serious eye damage
Acute Tox.oral 4  Acute toxicity, oral, Category 4
Eye Dam. 1  Serious eye damage or eye irritation, Category 1
Met. Corr. 1  Corrosive to metals, Category 1
Skin Irrit. 2  Skin corrosion or irritation, Category 2

Further Information

Copyright 2016 HiMedia Laboratories Pvt. Ltd.
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.