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**1. Identification of the substances/ mixture and of the company/ undertaking****1.1 Product Identifiers**

Product Code RM2391  
Product Name 2,4,6-Trinitrobenzenesulfonic acid, 5% solution in water

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

Identified uses Laboratory chemicals

**1.3 Details of the supplier of the safety data sheet**

Produced by HiMedia Laboratories Pvt. Ltd.  
Address 23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.  
Tel. No. +91-22-2500 0970, +91-22-2500 1607  
Fax No. +91-22-2500 2468

**1.4 Emergency Tel. No.**

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

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**2. Hazards Identification****2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Acute toxicity,oral (Category 4)  
Skin corrosion/irritation (Category 1A, B, C)  
Sensitisation, Skin (Category 1)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Explosive when dry.  
Harmful if swallowed.  
Irritating to eyes and skin.  
May cause sensitization by skin contact.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word Danger

Hazard Statement(s)

H302 Harmful if swallowed  
H314 Causes severe skin burns and eye damage  
H317 May cause an allergic skin reaction

Precautionary Statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face 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.  
P310 Immediately call a POISON CENTER or doctor/physician.

**According to European Directive 67/548/EEC as amended.**

Symbol(s)



**R-Phrase(s)**

R1 Explosive when dry.

R22 Harmful if swallowed.

R36/38 Irritating to eyes and skin.

R43 May cause sensitization by skin contact.

**S-Phrase(s)**

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S35 This material and its container must be disposed of in a safe way.

S36/37 Wear suitable protective clothing and gloves.

**2.3 Other hazards - none**

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**3. Composition/Information on Ingredients****3.1 Substances**

Synonym : Picrylsulfonic acid, 5% solution in water; TNBS

Molecular Formula  $C_6H_3N_3O_9S$ 

Molecular Weight. 293.17

| Component   |                                 | Concentration |
|---|---------------------------------|---------------|
| 2,4,6-Trinitrobenzenesulfonic acid, 5% solution in water) |                                 |               |
| CAS-No.   | 2508-19-2 (Picrylsulfonic acid) | 5%            |
|   | 7732-18-5 (Water)               | 95%           |
|   |                                 |               |
|   |                                 |               |

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**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 off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and 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

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**5. Fire Fighting Measures****5.1 Extinguishing media****Suitable extinguishing media**

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

**5.2 Special hazards arising from the substance or mixture**Carbon oxides, nitrogen oxides (NO<sub>x</sub>), 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

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## **6 Accidental Release Measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapors, 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 and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see Section 13.

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## **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.

### **7.3 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 : Store at 2 - 8°C

### **7.3 Specific end uses**

No data available

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## **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 product.

#### **Personal protective equipment**

##### **Hygiene measure**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance

##### **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 of 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 work place.

##### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the 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

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## **9 Physical and chemical properties**

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

|  |                             |
|--|-----------------------------|
| Appearance                                   | Colourless to yellow liquid |
| Odour  | No data available           |
| Odour Threshold                              | 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           |
| Upper/lower flammability or explosive limits | No data available           |
| Vapour pressure                              | No data available           |
| Vapour density                               | 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           |
| Decomposition Temperature                    | No data available           |
| Viscosity                                    | No data available           |
| Explosive properties                         | No data available           |
| Oxidizing properties                         | No data available           |

## 9.2 Other safety information

No data available

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## 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

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

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## 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

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

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.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity- single exposure

No data available

#### Aspiration hazard

No data available

## Potential Health Effects

### Inhalation.

Refer Section 2

**Skin**

Refer Section 2

**Eyes**

Refer Section 2

**Ingestion**

Refer Section 2

**Additional Information**

RTECS : Not Available

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**12 Ecological Information**

**12.1 Toxicity**

No data available

**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**

No data available

**12.6 Other adverse effects**

No data available

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**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 of this material.

**13.2 Contaminated packaging**

Dispose of as unused product.

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**14 Transport Information**

**14.1 UN-No.**

ADR/RID: 3265      IMDG: 3265      IATA: 3265

**14.2 UN proper shipping name**

ADR/RID : 2,4,6-Trinitrobenzenesulfonic acid, 5% solution in water

IMDG : 2,4,6-Trinitrobenzenesulfonic acid, 5% solution in water

IATA : 2,4,6-Trinitrobenzenesulfonic acid, 5% solution in water

**14.3 Transport hazard class(es)**

ADR/RID: 8      IMDG: 8      IATA: 8

**14.4 Packaging group**

ADR/RID: 2      IMDG: 2      IATA: 2

**14.5 Environmental hazards**

ADR/RID: No      IMDG: Marine Pollutant:No      IATA: No

**14.6 Special precautions for use**

No data available

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**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**

**16 Other Information**

**Further information**

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