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

1.1 Product Identifiers
Product Number     GRM1057
Product Name       Chromium trioxide
CAS No.            1333-82-0
EC No.             215-607-8

1.2 Relevant identified uses of the substance or mixture and uses advised against
1.2.1 Relevant identified uses Laboratory chemicals, Manufacture of substances

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

Hazard Identification

2.1 Classification of the substance or mixture
CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]

Oxidising liquids, (Category 1), H271
Toxic if swallowed or in contact with skin, H301+H311
Skin corrosion or irritation, (Category 1A), H314
Sensitisation, Skin, (Category 1), H317
Acute toxicity, Inhaled, (Category 2), H330
Sensitisation, respiratory, (Category 1), H334
Germ cell mutagenicity, (Category 1B), H340
Carcinogenicity, (Category 1A), H350
Reproductive toxicity, (Category 2), H361f
Specific target organ toxicity, repeated exposure, (Category 1), H372
Hazardous to the aquatic environment, long term hazard, (Category 1), H410

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

Pictogram
Signal word        Danger

Hazard Statement(s)
H271               May cause fire or explosion; strong oxidiser
H301+H311 Toxic if swallowed or in contact with skin
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H330 Fatal if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340 May cause genetic defects
H350 May cause cancer
H361f Suspected of damaging fertility
H372 Causes damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)
P201 Obtain special instructions before use.
P220 Keep/Store away from clothing/combustible materials.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 Wear respiratory protection.

2.3 Other Hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3 Composition/Information On Ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium trioxide</td>
<td>As Per EC Regulation 1272/2008 Oxy. Liq. 1; Acute Tox. oral. 3; Skin Corr. 1A; Skin Sens. 1; Acute Tox. inhal.1, 2; Resp. Sens. 1; Mut. 1A, 1B; Carc. 1A, 1B; Repr. 2; STOT RE 1; Aquatic Chronic 1 H271; H301+H311; H314; H317; H330; H334; H340; H350; H361f; H372; H410</td>
<td>100%</td>
</tr>
</tbody>
</table>

| Synonym | Chromic anhydride; Chromium (VI) oxide |
| Molecular Formula | CrO₃ |
| Molecular Weight | 99.99 |
| CAS No. | 1333-82-0 |
| EC No. | 215-607-8 |
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
Do NOT induce vomiting. 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
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

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
Chromium 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. Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). 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 dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

*Recommended Storage Temperature*: Below 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*
Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

*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*
Faceshield and safety goggles.

*Skin protection*
Handle with gloves.

*Body protection*
Complete suit protecting against chemicals.

*Respiratory protection*
Air-purifying respirators.

*Environment exposure controls*
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 Physical and chemical properties
9.1 Information on basic physical and chemical properties
*Appearance* Dark red to purple to black crystals or flakes or powder or masses
Odour
Odour Threshold
pH
Melting/freezing point
Initial boiling point and boiling range
Flash point
Upper/lower flammability or explosive limits
Evaporation rate
Flammability (Solid, gas)
Vapour pressure
Relative density
Water Solubility
Partition coefficient: n-octanol/water
Autoignition Temperature
Decomposition Temperature
Viscosity
Explosive properties
Oxidizing properties
Vapour density
Thermal decomposition

9.2 Other safety information
No data available

10 Stability and Reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Incompatible material
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
Other decomposition products - refer section 5.2.
In the event of fire - refer section 5.

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

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

**Aspiration hazard**
No data available

**Additional Information**
RTECS : GB6650000

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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
PBT and vPvB assessment not available Chemical safety assessment is not required

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

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13  Disposal Considerations
13.1  Waste treatments methods
**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustive solvent and burn in chemical incinerator equipped with an afterburner and scrubber.

13.2  Contaminated packaging
Dispose of as unused product.
14 Transport Information

14.1 UN-No
ADNR : 1463  ADR : 1463  IATA_C : 1463  IATA_P : 1463  IMDG : 1463  RID : 1463

14.2 UN proper shipping name
ADNR : Chromium trioxide, anhydrous
ADR : Chromium trioxide, anhydrous
IATA_C : Chromium trioxide, anhydrous
IATA_P : Chromium trioxide, anhydrous
IMDG : Chromium trioxide, anhydrous
RID : Chromium trioxide, anhydrous

14.3 Transport hazard class(es)
ADNR : 5.1(6.1,8)  ADR : 5.1(6.1,8)  IATA_C : 5.1(6.1,8)  IATA_P : 5.1(6.1,8)  IMDG : 5.1(6.1,8)  RID : 5.1(6.1,8)

14.4 Packaging group
ADNR : II  ADR : II  IATA_C : II  IATA_P : II  IMDG : II  RID : II

14.5 Environmental hazards
ADNR : No  ADR : No  IMDG : Marine Pollutant : Yes  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-Statements and EUH-Phrases mentioned in section 3
H271 May cause fire or explosion; strong oxidiser
H301+H311 Toxic if swallowed or in contact with skin
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H330 Fatal if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340 May cause genetic defects
H350 May cause cancer
H361f Suspected of damaging fertility
H372 Causes damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects
Ox. Liq. 1 Oxidising liquids, Category 1
Acute Tox. oral. 3 Acute toxicity, oral, Category 3
Skin Corr. 1A Skin corrosion or irritation, Category 1A
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Sens.</td>
<td>Sensitisation, Skin, Category 1</td>
</tr>
<tr>
<td>Acute Tox.inhal.1, 2</td>
<td>Acute toxicity, inhaled, Category 1, 2</td>
</tr>
<tr>
<td>Resp. Sens.</td>
<td>Sensitisation, respiratory, Category 1</td>
</tr>
<tr>
<td>Mut. 1A, 1B</td>
<td>Germ cell mutagenicity, Category 1A, 1B</td>
</tr>
<tr>
<td>Carc. 1A, 1B</td>
<td>Carcinogenicity, Category 1A, 1B</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity, Category 2</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity, repeated exposure, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment, long term hazard, Category 1</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.