1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>o-Cresol</td>
</tr>
<tr>
<td>Product Number</td>
<td>C85700</td>
</tr>
<tr>
<td>Brand</td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td>Supplier</td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td>Supplier Address</td>
<td>3050 Spruce Street</td>
</tr>
<tr>
<td></td>
<td>SAINT LOUIS MO 63103 USA</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 800-325-5832</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 800-325-5052</td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>(314) 776-6555</td>
</tr>
<tr>
<td>Precautionary</td>
<td>Sigma-Aldrich Corporation Product Safety -</td>
</tr>
<tr>
<td>Information</td>
<td>Americas Region</td>
</tr>
<tr>
<td></td>
<td>1-800-521-8956</td>
</tr>
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</table>

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive

Target Organs
Liver, Kidney, Pancreas., Spleen., Cardiovascular system., Central nervous system, Lungs

GHS Classification
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 3)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H301 + H311 Toxic if swallowed or in contact with skin
H315 Causes skin irritation.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H401 Toxic to aquatic life.

Precautionary statement(s)
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.
P284 Wear respiratory 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.

**HMIS Classification**

- **Health hazard:** 3
- **Chronic Health Hazard:** *
- **Flammability:** 0
- **Physical hazards:** 0

**NFPA Rating**

- **Health hazard:** 3
- **Fire:** 2
- **Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation**  
May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin**  
Toxic if absorbed through skin. Causes skin burns.

**Eyes**  
Causes eye burns.

**Ingestion**  
Toxic if swallowed.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>2-Methylphenol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C7H8O</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>108.14 g/mol</td>
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</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Cresol</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>95-48-7</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-423-8</td>
</tr>
<tr>
<td>Index-No.</td>
<td>604-004-00-9</td>
</tr>
</tbody>
</table>

**4. FIRST AID MEASURES**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

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

**5. FIREFIGHTING MEASURES**

**Conditions of flammability**
Not flammable or combustible.

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

**Special protective equipment for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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

**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place.

Air and light sensitive. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
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</thead>
<tbody>
<tr>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>TWA</td>
<td>5 ppm 22 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td><strong>Remarks</strong></td>
<td></td>
<td></td>
<td>Skin contact does contribute to exposure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm 22 mg/m³</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin contact does contribute to exposure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm 22 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin contact does contribute to exposure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2.3 ppm 10 mg/m³</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>20 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Upper Respiratory Tract irritation 2010 Adoption Not classifiable as a human carcinogen Danger of cutaneous absorption</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm 22 mg/m³</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td><strong>Skin notation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).
Hand 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.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: > 480 min
Material tested: Camatril® (Aldrich Z677442, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: > 30 min
Material tested: Dermatril® P (Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and 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.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Form</th>
<th>powder</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Colour</td>
<td>white</td>
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</tbody>
</table>

Safety data

<table>
<thead>
<tr>
<th>pH</th>
<th>4.5 at 25.00000 g/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/freezing point</td>
<td>Melting point/range: 29 - 31 °C (84 - 88 °F) - lit.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>191 °C (376 °F) - lit.</td>
</tr>
<tr>
<td>Flash point</td>
<td>81.0 °C (177.8 °F) - closed cup</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>599 °C (1,110 °F)</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>599.0 °C (1,110.2 °F)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>1.3 % (V)</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>58 % (V)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>3.1 hPa (2.3 mmHg) at 60.0 °C (140.0 °F)</td>
</tr>
<tr>
<td></td>
<td>1.3 hPa (1.0 mmHg) at 38.2 °C (100.8 °F)</td>
</tr>
<tr>
<td></td>
<td>0.4 hPa (0.3 mmHg) at 20.0 °C (68.0 °F)</td>
</tr>
<tr>
<td>Density</td>
<td>1.05 g/cm³ at 20.00 °C (68.00 °F)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>25 g/l at 20 °C (68 °F)</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
</tbody>
</table>
Relative vapour density
Odour
Odour Threshold
Evaporation rate

10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

**Conditions to avoid**
no data available

**Materials to avoid**
Oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**
LD50 Oral - rat - 121.0 mg/kg
Remarks: Behavioral:Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Ulceration or bleeding from stomach.

**Inhalation LC50**
LC50 Inhalation - rat - 1 h - > 1,220 mg/m3

**Dermal LD50**
LD50 Dermal - rabbit - 890.0 mg/kg

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
Skin - rabbit - Severe skin irritation - 24 h - Draize Test

**Serious eye damage/eye irritation**
Eyes - rabbit - Severe eye irritation - Draize Test

**Respiratory or skin sensitization**
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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation
May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion
Toxic if swallowed.

Skin
Toxic if absorbed through skin. Causes skin burns.

Eyes
Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Central nervous system depression, Diarrhoea, Gastrointestinal disturbance

Synergistic effects
no data available

Additional Information
RTECS: GO6300000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish
LC50 - Leuciscus idus (Golden orfe) - 10.00 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 15.8 mg/l - 48 h

Toxicity to algae
EC50 - SELENASTRUM - 100.00 mg/l - 72 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.
no data available
13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3455 Class: 6.1 (8) Packing group: II
Proper shipping name: Cresols, solid
Reportable Quantity (RQ): 100 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3455 Class: 6.1 (8) Packing group: II EMS-No: F-A, S-B
Proper shipping name: CRESOLS, SOLID
Marine pollutant: No

IATA
UN number: 3455 Class: 6.1 (8) Packing group: II
Proper shipping name: Cresols, solid

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive

SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
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<tbody>
<tr>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
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</thead>
<tbody>
<tr>
<td>o-Cresol</td>
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</table>

Pennsylvania Right To Know Components

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<th>CAS-No.</th>
<th>Revision Date</th>
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</thead>
<tbody>
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</table>

New Jersey Right To Know Components

<table>
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<tr>
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<th>CAS-No.</th>
<th>Revision Date</th>
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</thead>
<tbody>
<tr>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>2007-07-01</td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information