OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

# MATERIAL SAFETY DATA SHEET

# CONGO RED INDICATOR

## (For Microscopy)

## MSDS CAS: 573-58-0

## Section 1: Chemical Product and Company Identification

**Section 1: Chemical Product**

**Product Name: CONGO RED INDICATOR**

**CAS#: 573-58-0**

**Synonym: Direct Red 28; 1-Naphthalensulfonic acid, 3,3' -(4,4'-biphenylenebis (azo))bis(4-amino-, disodium Salt); 3,3'-[[1,1'-Biphenyl]-4,4'-diylbis(azo)]bis[4-amino-1-Naphthalene sulfonic acid disodium salt; Congo Red Certified; Congo Red Indicator Grade: C.I 22120**

**Chemical Name: Congo Red Indicator**

**Chemical Formula: $C_{32}$-$H_{22}$-$N_6$-$Na_2$-$O_6$-$S_2$**

**Brand: OXFORD**

**Details Of The Supplier Of The Safety Data Sheet :**

**Company identification:** **OXFORD LAB FINE CHEM LLP**
**Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,**
**Navghar, Vasai (East). Palghar - 401 210.**
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**Tel: 91-250-2390989**
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## Section 2: Composition and Information on Ingredients

**Composition:**

| Name | CAS # | % by Weight |
|---|---|---|
| Congo red Indicator | 573-58-0 | 100 |

# Section 2: Composition and Information on Ingredients (Continued)

**Toxicological Data on Ingredients:** **Congo red: ORAL (LD50): Acute: 15200 mg/kg [Rat].**

# Section 3: Hazards Identification

**Potential Acute Health Effects:**
**Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).**

**Potential Chronic Health Effects:**
**CARCINOGENIC EFFECTS: Not available.**
**MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.**
**TERATOGENIC EFFECTS: Classified POSSIBLE for human.**
**DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.**

# Section 4: First Aid Measures

**Eye Contact:**
**Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.**

**Skin Contact:**
**In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.**

**Serious Skin Contact:**
**Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.**

**Inhalation:**
**If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**

**Serious Inhalation:** **Not Available.**

# Section 4: First Aid Measures (Continued)

**Ingestion:**
**Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.**

**Serious Ingestion:** **Not available.**

# Section 5: Fire and Explosion Data

**Flammability of the Product:** **May be combustible at high temperature.**

**Auto-Ignition Temperature:** **Not applicable.**

**Flash Points:** **Not applicable.**

**Flammable Limits:** **Not available.**

**Products of Combustion:**
**These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), sulfur oxides (SO2, SO3...). Some metallic oxides.**

**Fire Hazards in Presence of Various Substances:**
**Slightly flammable to flammable in presence of open flames and sparks, of heat, of oxidizing materials. Non-flammable in presence of shocks.**

**Explosion Hazards in Presence of Various Substances:**
**Risks of explosion of the product in presence of mechanical impact: Not available.**
**Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of oxidizing materials.**

**Fire Fighting Media and Instructions:**
**SMALL FIRE: Use DRY chemical powder.**
**LARGE FIRE: Use water spray, fog or foam. Do not use water jet.**

**Special Remarks on Fire Hazards:** **Strong oxidizing agents can cause fire on contact.**

**Special Remarks on Explosion Hazards:**
**Avoid contact with oxidizing agents (i.e. perchlorates, peroxide, permanganates, chlorates, nitrates, chlorine, bromine, and fluorine) as a fire or explosion can occur on contact.**

# Section 6: Accidental Release Measures

**Small Spill:**
**Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.**

**Large Spill:**
**Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.**

# Section 7: Handling and Storage

**Precautions:**
**Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, metals.**

**Storage:**
**Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).**

# Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**
**Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.**

**Personal Protection:**
**Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.**

**Personal Protection in Case of a Large Spill:**
**Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.**

**Exposure Limits:** **Not available.**

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Powdered solid.)

| | |
|---|---|
| **Odor** | : Odorless. |
| **Taste** | : Not available. |
| **Molecular Weight** | : 696.67 g/mole |
| **Color** | : Red. Brownish-red. (Dark.) |
| **pH (1% soln/water)** | : 8.5 - 9.0 [Basic.] |
| **Boiling Point** | : Not available. |
| **Melting Point** | : >360°C (680°F) |
| **Critical Temperature** | : Not applicable. |
| **Specific Gravity** | : Not available. |
| **Vapor Pressure** | : Not applicable. |
| **Vapor Density** | : Not applicable. |
| **Volatility** | : Not available. |
| **Odor Threshold** | : Not applicable. |
| **Water/Oil Dist. Coeff.** | : Not applicable. |
| **Ionicity (in Water)** | : Not available. |
| **Dispersion Properties** | : See solubility in water. |
| **Solubility** | : Soluble in cold water. Very slightly soluble in acetone. Insoluble in diethyl ether. Soluble in Ethanol. Solubility in water: 1g/30 ml water. |

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, incompatible materials.

**Incompatibility with various substances:**
Highly reactive with oxidizing agents. Reactive with reducing agents, acids.

**Corrosivity:** Not Available.

# Section 10: Stability and Reactivity Data (Continued)

**Special Remarks on Reactivity:**
**Decomposes on exposure to acid fumes. Avoid contact with oxidizing agents (i.e. perchlorates, peroxide, permanganates, chlorates, nitrates, chlorine, bromine, and fluorine) as a fire or explosion can occur on contact. Incompatible with strong acids (i.e. Hydrochloric, Sulfuric, and Nitric) and reducing agents.**

**Special Remarks on Corrosivity: Not available.**

**Polymerization: Will not occur.**

# Section 11: Toxicological Information

**Routes of Entry: Inhalation. Ingestion.**

**Toxicity to Animals: Acute oral toxicity (LD50): 15200 mg/kg [Rat].**

**Chronic Effects on Humans:**
**MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Classified POSSIBLE for human.**

**Other Toxic Effects on Humans:**
**Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).**

**Special Remarks on Toxicity to Animals: Not available.**

**Special Remarks on Chronic Effects on Humans:**
**May cause adverse reproductive effects (fetotoxicity, female and male fertility)and birth defects (teratogenic – developmental abnormalities) based on animal data. May affect genetic material (mutagenic) based on animal data. No data is available from IARC, NTP, or OSHA regarding the carcinogenicity of Congo Red. However, Congo red is a benzidine-based dye and benzidine has been classified by IARC as Group 1 carcinogen.**

**Special Remarks on other Toxic Effects on Humans:**
**Acute Potential Health Effects: Skin: May cause skin irritation. May cause allergic reaction. Eyes: Causes eye irritation. Ingestion: May be harmful if swallowed, particulary if ingested in large amounts. May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect blood (change in clotting factors, alterations of platelets and leukocytes, transient leukopenia, leukocytosis), behavior (somnolence), respiration (dyspnea, chronic pulmonary edema), and the vascular system. Inhalation: May be harmful if inhaled. May cause respiratory tract and mucous membrane irritation.**

# Section 12: Ecological Information

**Ecotoxicity: Not available.**

**BOD5 and COD: Not available.**

**Products of Biodegradation:**
**Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.**

**Toxicity of the Products of Biodegradation:**
**The product itself and its products of degradation are not toxic.**

**Special Remarks on the Products of Biodegradation: Not available.**

# Section 13: Disposal Considerations

**Waste Disposal :**
**Waste must be disposed of in accordance with federal, state and local environmental control regulations.**

# Section 14: Transport Information

**Land transport (ADR-RID)**

**General information : Not regulated.**

**Sea transport (IMDG) [English only]**

**General information : Not regulated.**

**Air transport (ICAO-IATA) [English only]**

**General information : Not regulated.**

# Section 15: Other Regulatory Information

**Federal and State Regulations:**
**New Jersey: Congo red TSCA 8(b) inventory: Congo red TSCA 5(a) 2 proposed significant rules: Congo red TSCA 8(d) H and S data reporting: Congo red TSCA 12(b) one time export: Congo red**

**Other Regulations:**
**EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.**

**Other Classifications:**
**WHMIS (Canada): Not controlled under WHMIS (Canada).**
**DSCL (EEC): R16- Explosive when mixed with oxidizing substances. R36/38- Irritating to eyes and skin. R40- Possible risks of irreversible effects. R63- Possible risk of harm to the unborn child. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.**

**HMIS (U.S.A.):**
**Health Hazard: 2**
**Fire Hazard: 1**
**Reactivity: 0**
**Personal Protection: E**

**National Fire Protection Association (U.S.A.):**
**Health: 2**
**Flammability: 1**
**Reactivity: 0**
**Specific hazard:**

**Protective Equipment:**
**Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.**

# Section 16 - Additional Information

**References: Not available.**

**Other Special Considerations: Not available.**

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