1. Identification

Product Name: Congo red
Cat No.: AC110500000; AC110501000; AC110505000
Synonyms: Direct Red 28; C.I. 22120
Recommended Use: Laboratory chemicals.
Uses advised against: No Information available

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Carcinogenicity</th>
<th>Category 1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
May cause cancer
Suspected of damaging the unborn child

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Response
IF exposed or concerned: Get medical attention/advice
Storage
Store locked up
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified
WARNING! This product contains a chemical known in the State of California to cause cancer.
Unknown Acute Toxicity
.??% of the mixture consists of ingredients of unknown toxicity.

### 3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>573-58-0</td>
<td>75-80</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

**Eye Contact**
Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Inhalation**
Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

**Ingestion**
Call a physician immediately. Clean mouth with water.

**Most important symptoms/effects**
No information available.

**Notes to Physician**
Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media**
Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

**Unsuitable Extinguishing Media**
No information available

**Flash Point**
No information available

**Method -**
No information available

**Autoignition Temperature**
No information available

**Explosion Limits**
Upper No data available
Lower No data available

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Flammable. Combustible material.

**Hazardous Combustion Products**
Nitrogen oxides (NOx) Carbon monoxide (CO) Carbon dioxide (CO₂) Sulfur oxides Ammonia

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. Accidental release measures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions: See Section 12 for additional ecological information.

Methods for Containment and Clean Up: Avoid dust formation. Wear self-contained breathing apparatus and protective suit. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

7. Handling and storage

Handling: Avoid contact with skin and eyes. Do not breathe dust. Avoid contact with clothing. Do not get in eyes, on skin, or on clothing. Do not ingest. Use only in area provided with appropriate exhaust ventilation. Use explosion-proof equipment. Use only non-sparking tools.

Storage: Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Flammables area.

8. Exposure controls / personal protection

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.


Personal Protective Equipment

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Red brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>8 - 9.5 10g/L (20°C)</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>&gt; 360 °C / 680 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Stable under normal conditions.

Conditions to Avoid

Incompatible Materials
Strong oxidizing agents, Strong acids, Strong reducing agents

Hazardous Decomposition Products
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides, Ammonia

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity
No acute toxicity information is available for this product

Oral LD50
Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50
Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Mist LC50
Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>15200 (Rat)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
No information available

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>573-58-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
Teratogenic effects have occurred in experimental animals.

STOT - single exposure
None known
STOT - repeated exposure  None known
Aspiration hazard           No information available
Symptoms / effects, both acute and delayed  No information available
Endocrine Disruptor Information  No information available
Other Adverse Effects  The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological Information

Ecotoxicity
Do not empty into drains.

Persistence and Degradability  Soluble in water Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation  No information available.
Mobility  Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods  Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT  Not regulated
TDG  Not regulated
IATA  Not regulated
IMDG/IMO  Not regulated

15. Regulatory Information

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>209-358-4</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA 12(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>Section 5</td>
</tr>
</tbody>
</table>

SARA 313  Not applicable
SARA 311/312 Hazardous Categorization

- Acute Health Hazard: No
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Water Act: Not applicable
Clean Air Act: Not applicable
OSHA Occupational Safety and Health Administration: Not applicable
CERCLA: Not applicable

California Proposition 65
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>573-58-0</td>
<td>Carcinogen</td>
<td>-</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

State Right-to-Know: Not applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Direct red 28</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

- Reportable Quantity (RQ): N
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

- Mexico - Grade: No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class: D2A Very toxic materials

16. Other information

Prepared By: Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date: 17-May-2010
Revision Date: 13-Jul-2015
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS); SDS sections updated; 14

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS