



**Neutron®**Pharmachemical Co.  
Manufacturer of Laboratory Chemical & Pharmaceutical Materials

# Congo Red

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/15/2014

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Supersedes: 12/15/2014

Version: 1.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Substance name : Congo Red  
Chemical name : disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate), C.I. Direct Red 28  
CAS-No. : 573-58-0  
Product code : 1.5090  
Formula : C32H22N6Na2O6S2

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.

#### 1.3. Supplier

NEUTRON PHARMACHEMICAL CO  
98, 9th Floor, Borjsaz Building, Azadi Ave, Tehran, Iran.  
T 021-66906732-3 - F 021-66581408  
[info@neutronpharmachemical.com](mailto:info@neutronpharmachemical.com) -  
[www.neutronpharmachemical.com](http://www.neutronpharmachemical.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 125

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Carcinogenicity Category 1B H350 May cause cancer  
Reproductive toxicity Category 2 H361 Suspected of damaging fertility or the unborn child

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H350 - May cause cancer  
H361 - Suspected of damaging fertility or the unborn child  
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P280 - Wear protective gloves, eye protection.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P405 - Store locked up.  
P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent

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| Name                            | Product identifier | %   | GHS-US classification           |
|---------------------------------|--------------------|-----|---------------------------------|
| Congo Red<br>(Main constituent) | (CAS-No.) 573-58-0 | 100 | Carc. 1B, H350<br>Repr. 2, H361 |

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects : May cause cancer. Suspected of damaging fertility or the unborn child.
- Symptoms/effects after inhalation : Headache. Dizziness.
- Symptoms/effects after skin contact : May cause moderate irritation.
- Symptoms/effects after eye contact : May cause eye irritation.
- Symptoms/effects after ingestion : Nausea. Vomiting.
- Symptoms/effects upon intravenous administration : Not available.
- Chronic symptoms : Not available.

### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance. Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.
- Explosion hazard : No direct explosion hazard.
- Reactivity : Product is not explosive.

### 5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Evacuate area. Stop leak if safe to do so.
- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

- General measures : Evacuate area. Absorb spillage to prevent material-damage.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Dust mask.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

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### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- |                         |                                                                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| For containment         | : Collect spillage.                                                                                                                                       |
| Methods for cleaning up | : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. Carefully collect the spill/leftovers. |

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- |                               |                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.                                                                                                                                                                      |

### 7.2. Conditions for safe storage, including any incompatibilities

- |                        |                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures     | : Comply with applicable regulations.                                                                                                            |
| Storage conditions     | : Keep only in the original container in a cool, well ventilated place away from : combustible materials. Keep container closed when not in use. |
| Incompatible products  | : Strong oxidizers. Strong bases. Strong acids.                                                                                                  |
| Incompatible materials | : Sources of ignition. Direct sunlight.                                                                                                          |
| Storage area           | : Keep container in a well-ventilated place. Keep locked up. Store in a cool area.                                                               |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

- |                                  |                                                                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate engineering controls | : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation. |
| Environmental exposure controls  | : Avoid release to the environment.                                                                                                                     |

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Dust production: dust mask with filter type P1. Gloves. Safety glasses.



#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Protective clothing

#### Respiratory protection:

Dust production: dust mask with filter type P1

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### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

|                                             |                                                                                          |
|---------------------------------------------|------------------------------------------------------------------------------------------|
| Physical state                              | : Solid                                                                                  |
| Appearance                                  | : Powder.                                                                                |
| Color                                       | : red brown                                                                              |
| Odor                                        | : None.                                                                                  |
| Odor threshold                              | : No data available                                                                      |
| pH                                          | : No data available                                                                      |
| Melting point                               | : > 360 °C                                                                               |
| Freezing point                              | : No data available                                                                      |
| Boiling point                               | : No data available                                                                      |
| Flash point                                 | : No data available                                                                      |
| Relative evaporation rate (butyl acetate=1) | : No data available                                                                      |
| Flammability (solid, gas)                   | : Non flammable.                                                                         |
| Vapor pressure                              | : No data available                                                                      |
| Relative vapor density at 20 °C             | : No data available                                                                      |
| Relative density                            | : No data available                                                                      |
| Molecular mass                              | : 696.67 g/mol                                                                           |
| Solubility                                  | : Soluble in water.<br>Water: 25 g/l<br>Ethanol: 1 g/l<br>Organic solvent:1 g/100ml EGME |
| Log Pow                                     | : No data available                                                                      |
| Auto-ignition temperature                   | : No data available                                                                      |
| Decomposition temperature                   | : No data available                                                                      |
| Viscosity, kinematic                        | : No data available                                                                      |
| Viscosity, dynamic                          | : No data available                                                                      |
| Explosion limits                            | : No data available                                                                      |
| Explosive properties                        | : No data available                                                                      |
| Oxidizing properties                        | : No data available                                                                      |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Product is not explosive.

### 10.2. Chemical stability

Stable under normal conditions. Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Nitrogen oxides. Sulfur compounds. fume. Carbon monoxide. Carbon dioxide.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact; Inhalation; Ingestion  
Acute toxicity : Not classified

| Congo Red (573-58-0)                                |                                                                     |
|-----------------------------------------------------|---------------------------------------------------------------------|
| LD50 oral rat                                       | 15200 mg/kg                                                         |
| Skin corrosion/irritation                           | : Not classified                                                    |
| Serious eye damage/irritation                       | : Not classified                                                    |
| Respiratory or skin sensitization                   | : Not classified                                                    |
| Germ cell mutagenicity                              | : Not classified                                                    |
| Carcinogenicity                                     | : May cause cancer.                                                 |
| Reproductive toxicity                               | : Suspected of damaging fertility or the unborn child.              |
| Specific target organ toxicity – single exposure    | : Not classified                                                    |
| Specific target organ toxicity – repeated exposure  | : Not classified                                                    |
| Aspiration hazard                                   | : Not classified                                                    |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects after inhalation                   | : Headache. Dizziness.                                              |
| Symptoms/effects after skin contact                 | : May cause moderate irritation.                                    |
| Symptoms/effects after eye contact                  | : May cause eye irritation.                                         |
| Symptoms/effects after ingestion                    | : Nausea. Vomiting.                                                 |
| Symptoms/effects upon intravenous administration    | : Not available.                                                    |
| Chronic symptoms                                    | : Not available.                                                    |

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Not classified due to lack of data.

#### 12.2. Persistence and degradability

| Congo Red (573-58-0)          |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

#### 12.3. Bioaccumulative potential

| Congo Red (573-58-0)      |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Regional legislation (waste) : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations. Avoid release to the environment. Avoid any discharge of the product into waste water.  
Additional information : Clean up even minor leaks or spills if possible without unnecessary risk.  
Ecology - waste materials : Avoid release to the environment.

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### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated

#### Transportation of Dangerous Goods

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Congo Red (573-58-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Health hazard - Carcinogenicity

Health hazard - Reproductive toxicity

#### 15.2. International regulations

##### CANADA

##### Congo Red (573-58-0)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

##### Congo Red (573-58-0)

Not listed on the Canadian IDL (Ingredient Disclosure List)

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

Revision date : 04/18/2018

Other information : None.

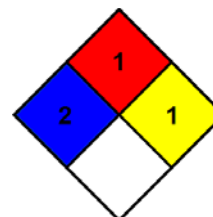
Full text of H-phrases: see section 16:

|      |                                                     |
|------|-----------------------------------------------------|
| H350 | May cause cancer                                    |
| H361 | Suspected of damaging fertility or the unborn child |

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



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|                     |                                                                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard Rating       |                                                                                                                                                                                                                                                |
| Health              | : 2 Moderate Hazard - Temporary or minor injury may occur                                                                                                                                                                                      |
| Flammability        | : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)                                                                       |
| Physical            | : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors. |
| Personal protection | : E<br>E - Safety glasses, Gloves, Dust respirator                                                                                                                                                                                             |

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