

# Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 03.02.2022

Version number 1

Revision Date 03.02.2022

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: Congo Red**
- **Article number:** AGR1733
- **CAS Number:**  
573-58-0
- **EC number:**  
209-358-4
- **Index number:**  
611-027-00-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Laboratory chemicals, Manufacture of substances.
- **Application of the substance / the preparation:** No further relevant information
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier.**  
Agar Scientific Ltd  
Parsonage Lane  
Stansted CM24 8GF  
United Kingdom  
sales@agarscientific.com  
Tel: +44 (0) 1279 813 519
- **Further information obtainable from:** Technical Support
- **1.4 Emergency telephone number:** 24 hours: +44 (0)1856 407333

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



health hazard

- Carc. 1B H350 May cause cancer.
- Repr. 2 H361d Suspected of damaging the unborn child.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)
- **Hazard statements**  
H350 May cause cancer.  
H361d Suspected of damaging the unborn child.
- **Precautionary statements**  
P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read carefully and follow all instructions.  
P201 Obtain special instructions before use.

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- P202 Do not handle until all safety precautions have been read and understood.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**

Synonyms:

Direct Red 28  
 Congo Red 4B  
 Cosmos Red  
 Cotton Red B  
 Direct Red R  
 Direct Red Y  
 Cotton Red C

- **CAS No. Description**

573-58-0 disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)

- **Identification number(s)**

- **EC number:** 209-358-4

- **Index number:** 611-027-00-8

- **Additional information:**

Formula :  $C_{32}H_{22}N_6Na_2O_6S_2$   
 Molecular weight: 696.66 g/mol

- **SVHC**

573-58-0	disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)
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## SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

Consult a physician. Show this safety data sheet to the doctor in attendance.

- **After inhalation:**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

- **After skin contact:** Wash off with soap and plenty of water. Consult a physician.

- **After eye contact:**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

- **After swallowing:**

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**

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Use fire extinguishing methods suitable to surrounding conditions.  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **5.2 Special hazards arising from the substance or mixture**  
Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Sodium oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
- **6.2 Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.
- **Information about fire - and explosion protection:**  
Extinguishing media: Water fog - dried resin only.
- **7.2 Conditions for safe storage, including any incompatibilities**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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).

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, 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 and safety officer 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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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**· Eye protection:**


Tightly sealed goggles

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**· Body protection:**

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## SECTION 9: Physical and chemical properties

**· 9.1 Information on basic physical and chemical properties**
**· General Information**
**· Appearance:**

Form:	Solid
Colour:	Red-brown
· Odour:	Odourless
· Odour threshold:	Not determined.

· pH-value: Not applicable.

**· Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Product is not flammable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

**· Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

**· Solubility in / Miscibility with water:**

Insoluble.

· Partition coefficient: n-octanol/water: Not determined.

**· Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

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**9.2 Other information**

 Solubility in other solvents:  
 Ethanol - insoluble  
 Ether - insoluble  
 Acetone - insoluble

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidising agents.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

**LD/LC50 values relevant for classification:**

Oral	LD50	15,200 mg/kg (rat)
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**573-58-0 disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)**

Oral	LD50	15,200 mg/kg (rat)
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- **Specific symptoms in biological assay:**
- **Skin corrosion/irritation** No data available.
- **Serious eye damage/irritation**  
Eyes - Rabbit  
Result: Moderate eye irritation (Draize Test)
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Other information (about experimental toxicology):**  
LDLO Oral - Human - 143 mg/kg  
Remarks: Vascular:Other changes.

LDLO Intravenous - Human - 1.429 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration: Dyspnea.

- **Additional toxicological information:**  
Germ cell mutagenicity  
Ames test - S. typhimurium - Histidine reversion (Ames)  
Rat - Liver - Unscheduled DNA synthesis

Reproductive toxicity: Possible risk of congenital malformation in the fetus.

Reproductive toxicity - Rat - female - Intraperitoneal Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Reproductive toxicity - Mouse - female - Oral - Effects on Fertility: Female fertility index (e.g., females pregnant per sperm positive females; females pregnant per females mated ).

Developmental Toxicity - Rat - female - Intraperitoneal Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Urogenital system.

Developmental Toxicity - Rat - female - Intraperitoneal Effects on Embryo or Fetus: Other effects to embryo.

Developmental Toxicity - Mouse - female - Intraperitoneal Specific Developmental Abnormalities: Urogenital system.

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Developmental Toxicity - Mouse - female - Oral - Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
May cause cancer.
- **Reproductive toxicity**  
Suspected of damaging the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**  
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.
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- **Recommendation:** Dispose of packaging as of unused product.

## SECTION 14: Transport information

- |   |      |
|---|------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>  | Void |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                            | Void |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Void |

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- |  |                 |
|--|-----------------|
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                          | Void            |
| · <b>14.5 Environmental hazards:</b><br>· <b>Marine pollutant:</b>               | No              |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Directive 2012/18/EU**
  - **Named dangerous substances - ANNEX I** Substance is not listed.
  - **National regulations:**
  - **Additional classification according to Decree on Hazardous Materials, Annex II:**  
 Carcinogenic hazardous material group I (extremely dangerous).  
 Carcinogenic hazardous material group II (very dangerous).  
 Carcinogenic hazardous material group III (dangerous).
  - **Information about limitation of use:**  
 Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
  - **Other regulations, limitations and prohibitive regulations**
- |  |  |
|--|--|
| <b>Substances of very high concern (SVHC) according to REACH, Article 57</b> | 573-58-0   disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) |
|--|--|
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Sales department
- **Contact:**  
 sales@agarscientific.com  
 Tel: +44 (0) 1279 813 519
- **Abbreviations and acronyms:**  
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 SVHC: Substances of Very High Concern  
 vPvB: very Persistent and very Bioaccumulative  
 Carc. 1B: Carcinogenicity – Category 1B  
 Repr. 2: Reproductive toxicity – Category 2
- **\* Data compared to the previous version altered.**