

## MATERIAL SAFETY DATA SHEET

Date Printed: 08/10/2007

Date Updated: 02/07/2006

Version 1.8

## Section 1 - Product and Company Information

Product Name CONGO RED  
Product Number C6767  
Brand SIGMA

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
CONGO RED	573-58-0	No

Formula C32H22N6Na2O6S2

Synonyms Atlantic Congo Red \* Atul Congo Red \* Azocard Red Congo \* Benzo Congo Red \* Brasilamina congo 4B \* Cerven kongo (Czech) \* Cerven prima 28 (Czech) \* C.I. 22120 \* C.I. Direct Red 28 \* C.I. Direct Red 28, disodium salt \* Congo Red \* Congo Red 4B \* Congo Red 4BX \* Congo Red CR \* Congo Red H \* Congo Red ICI \* Congo Red L \* Congo Red M \* Congo Red N \* Congo Red R \* Congo Red RS \* Congo Red W \* Cotton Red 5B \* Cotton Red 4BC \* Cotton Red L \* Diacotton Congo Red \* Direct Red 28 \* Direct Red C \* Direct Red DC-CF \* Direct Red K \* Erie Congo 4B \* Haemonorm \* Hemorrhagyl \* Hispamin congo 4B \* Kayaku Congo Red \* Kongorot (German) \* Mitsui Congo Red \* Peeramine Congo Red \* Red K \* Sodium diphenyldiazo-bis(alpha-naphthylaminesulfonate) \* Sugai Congo Red \* Tertrodirect Red C \* Trisulfon Congo Red \* Vondacel Red CL \* Natrium-salz der diphenyl-bis-azo-bis-naphthylamin-4-sulfonsaeure (German) \* C.I. 22120 \* DIRECT RED 28

RTECS Number: QK1400000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Toxic.

May cause cancer. Possible risk of harm to the unborn child.

Irritating to eyes, respiratory system and skin.

Calif. Prop. 65 carcinogen.

## HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING  
HEALTH: 2  
FLAMMABILITY: 0  
REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

---

#### Section 4 - First Aid Measures

---

##### ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

##### INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

##### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

##### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

---

#### Section 5 - Fire Fighting Measures

---

##### FLASH POINT

N/A

##### AUTOIGNITION TEMP

N/A

##### FLAMMABILITY

N/A

##### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

##### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

---

#### Section 6 - Accidental Release Measures

---

##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

##### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

---

## Section 7 - Handling and Storage

---

### HANDLING

User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

### STORAGE

Suitable: Keep tightly closed.

---

## Section 8 - Exposure Controls / PPE

---

### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

---

## Section 9 - Physical/Chemical Properties

---

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	696.67 AMU	
pH	6.7	20 °C Concentration: 10 g/l
BP/BP Range	N/A	
MP/MP Range	360 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	600.0 - 700.0 kg/l	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	

Optical Rotation N/A  
Miscellaneous Data N/A  
Solubility Solubility in Water:25 mg/ml H2O  
Other Solvents: INSOLUBLE IN ETHER ETHANOL,  
ACETONE

N/A = not available

---

## Section 10 - Stability and Reactivity

---

### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide,  
Nitrogen oxides, Sulfur oxides.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

---

## Section 11 - Toxicological Information

---

### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: Material is irritating to mucous membranes and upper  
respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and  
toxicological properties have not been thoroughly investigated.

### TOXICITY DATA

Oral

Man

143 mg/kg

LDLO

Remarks: Vascular:Other changes.

Intravenous

Man

1429 UG/KG

LDLO

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Blood:Change in clotting factors. Lungs, Thorax, or

Respiration:Dyspnea.

Oral

Rat

15200 mg/kg

LD50

### IRRITATION DATA

Eyes

Rabbit

100 mg

Remarks: Moderate irritation effect

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

CHRONIC EXPOSURE - TERATOGEN

Result: Possible risk of congenital malformation in the fetus.

Species: Rat

Dose: 200 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (9D PREG)

Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Urogenital system. Specific Developmental Abnormalities: Eye, ear.

Species: Rat

Dose: 200 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (8D PREG)

Result: Effects on Embryo or Fetus: Other effects to embryo.

Species: Mouse

Dose: 5 GM/KG

Route of Application: Oral

Exposure Time: (8-12D PREG)

Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Germ cell effects (in offspring). Effects on Newborn: Delayed effects.

Species: Mouse

Dose: 300 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (8D PREG)

Result: Specific Developmental Abnormalities: Urogenital system.

CHRONIC EXPOSURE - MUTAGEN

Species: Rat

Dose: 10 UMOL/L

Cell Type: liver

Mutation test: Unscheduled DNA synthesis

Species: Rat

Dose: 300 MG/KG

Cell Type: S. typhimurium

Mutation test: Body fluid assay

Species: Mouse

Route: Skin

Dose: 192 UMOL/KG

Mutation test: DNA

Species: Hamster

Dose: 10 UMOL/L

Cell Type: liver

Mutation test: Unscheduled DNA synthesis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat

Dose: 140 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (9D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Rat  
Dose: 140 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (8D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Mouse  
Dose: 5 GM/KG  
Route of Application: Oral  
Exposure Time: (MULTIGENERATION)  
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ).

Species: Mouse  
Dose: 5 GM/KG  
Route of Application: Oral  
Exposure Time: (8-12D PREG)  
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical.

Species: Mouse  
Dose: 2500 UG/KG  
Route of Application: Oral  
Exposure Time: (MULTIGENERATION)  
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

Species: Mouse  
Dose: 5 GM/KG  
Route of Application: Oral  
Exposure Time: (8-12D PREG)  
Result: Effects on Newborn: Other postnatal measures or effects.

Species: Mouse  
Dose: 1500 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (8-12D PREG)  
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical.

---

## Section 12 - Ecological Information

---

No data available.

---

## Section 13 - Disposal Considerations

---

### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. (DN)Requires special label: "Contains a substance which is regulated by Danish work environmental law due to the risk of carcinogenic properties."

---

## Section 14 - Transport Information

---

### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

---

## Section 15 - Regulatory Information

---

### EU DIRECTIVES CLASSIFICATION

Symbol of Danger: T  
Indication of Danger: Toxic.  
R: 45-63  
Risk Statements: May cause cancer. Possible risk of harm to the unborn child.  
S: 53-45  
Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.  
Risk Statements: May cause cancer. Possible risk of harm to the unborn child. Irritating to eyes, respiratory system and skin.  
Safety Statements: Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
US Statements: Calif. Prop. 65 carcinogen.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
TSCA INVENTORY ITEM: Yes

### UNITED STATES - STATE REGULATORY INFORMATION

#### CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s) known to the state of California to cause cancer.

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.  
DSL: Yes  
NDSL: No

---

## Section 16 - Other Information

---

### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The

information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.