



## Material Safety Data Sheet

acc. to WHMIS 2015

Printing date 05/25/2018

Reviewed on 05/25/2018

### 1 Identification

· **Product identifier**

· **Product name: 2-Benzyl-4-chlorophenol**

· **Part number:** DRE-C10572000

· **CAS Number:**  
120-32-1

· **EC number:**  
204-385-8

· **Application of the substance / the mixture** Reference material for laboratory use only

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

VHG Labs, Inc  
LGC Standards  
276 Abby Road  
Manchester, NH 03103  
UNITED STATES OF AMERICA

Tel : +1 (603) 622-7660  
Fax : +1 (603) 622-5180

eMail : [custsvc@vhglabs.com](mailto:custsvc@vhglabs.com)  
Web : [www.vhglabs.com](http://www.vhglabs.com)

· **Information department:**

Product safety department  
eMail : [sds-request@lgcgroup.com](mailto:sds-request@lgcgroup.com)

· **Emergency telephone number:**

INFOTRAC 24-hour Emergency telephone number:  
800-535-5053 (US & Canada);  
352-323-3500 (International)

### 2 Hazard(s) identification

· **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity – Category 2

H351 Suspected of causing cancer.

Reproductive Toxicity - Category 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure - Category 2

H373 May cause damage to the kidneys through prolonged or repeated exposure.



GHS05 Corrosion

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS09 Environment

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Aquatic Acute 1  
Aquatic Chronic 1

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Toxicity (Oral) - Category 4  
Acute Toxicity (Inhalation) - Category 4  
Skin Irritation - Category 2  
Skin Sensitizer - Category 1

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

· **Label elements**

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

GHS07

GHS08

GHS09

· **Signal word** Danger

· **Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to the kidneys through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

D1B - Toxic material causing immediate and serious toxic effects

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*D2A - Very toxic material causing other toxic effects*

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
120-32-1 Clorofene
- **Identification number(s) -**
- **EC number:** 204-385-8
- **RTECS:** GO 7175000

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
*Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*
- **After inhalation:**  
*Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.  
Seek medical treatment.*
- **After skin contact:**  
*Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.*
- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
- **After swallowing:** *Rinse mouth. Do not induce vomiting.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**  
Mouth respiratory protective device.  
Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.  
Avoid formation of dust.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Thorough dedusting.  
Store in cool, dry place in tightly closed receptacles.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.

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Please refer to the manufacturers certificate for specific storage and transport temperature conditions.

Store only in the original receptacle.

Keep container in a well-ventilated place. Keep away from sources of ignition and heat.

- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:** Not required.

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**

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

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

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves** Fluorocarbon rubber (Viton)

- **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

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

· <b>Form:</b>	Solid
· <b>Color:</b>	Light yellow
· <b>Odor:</b>	Phenol-like
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.· **Change in condition**

· <b>Melting point/Melting range:</b>	44-47 °C
· <b>Boiling point/Boiling range:</b>	327 °C

· **Flash point:** 188 °C· **Flammability (solid, gaseous):** Not determined.· **Ignition temperature:** 490 °C· **Decomposition temperature:** Not determined.· **Auto igniting:** Not determined.· **Danger of explosion:** Not determined.· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.

· <b>Density at 20 °C:</b>	1.188 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

· **Solubility in / Miscibility with**· **Water at 20 °C:** 0.5 g/l· **Partition coefficient (n-octanol/water):** 3.6 Log P· **Viscosity:**· **Dynamic:** Not applicable.

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- Kinematic:** Not applicable.  
**Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** Stable under normal conditions.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**  
Formation of toxic gases is possible during heating or in case of fire.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat.
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
- |        |        |                      |
|--------|--------|----------------------|
| Oral   | (LD50) | 1,700 mg/kg (rat)    |
| Dermal | LD50   | 5,010 mg/kg (rabbit) |
- **LD/LC50 values that are relevant for classification:**
  - **Primary irritant effect:**
    - **on the skin:** Irritant to skin and mucous membranes.
    - **on the eye:** Strong irritant with the danger of severe eye injury.
  - **Sensitization:** Sensitization possible through skin contact.
  - **Additional toxicological information:**
  - **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)** Substance is not listed.
  - **NTP (National Toxicology Program)** Substance is not listed.

### 12 Ecological information

- **Toxicity**
- |                            |                        |
|----------------------------|------------------------|
| · <b>Aquatic toxicity:</b> |                        |
| EC50/48 h                  | 0.59 mg/l (crustacean) |
| LC50/96 h                  | 0.525 mg/l (fish)      |
- **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Ecotoxicological effects:**
  - **Remark:** Very toxic for fish

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- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Assessment by list): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.  
 Also poisonous for fish and plankton in water bodies.  
 Very toxic for aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** *Dispose in accordance with national regulations.*

## 14 Transport information

- **UN-Number**
  - **DOT, TDG, IMDG, IATA**
  - **DOT**
  - **TDG**
  - **IMDG**
  - **IATA**
- UN3077  
 Environmentally hazardous substances, solid, n.o.s. (Clorofene)  
 3077 Environmentally hazardous substances, solid, n.o.s. (Clorofene)  
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Clorofene), MARINE POLLUTANT  
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Clorofene)

- **Transport hazard class(es)**
- **DOT, TDG, IMDG, IATA**



- **Class**
  - **Label**
- 9 Miscellaneous dangerous substances and articles  
 9

- **Packing group**
  - **DOT, TDG, IMDG, IATA**
- III

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<ul style="list-style-type: none"><li>· <b>Environmental hazards:</b></li><li>· <b>Marine pollutant:</b></li></ul>	<p>Yes (P) Symbol (fish and tree)</p>
<ul style="list-style-type: none"><li>· <b>Special marking (TDG):</b></li><li>· <b>Special marking (IATA):</b></li></ul>	<p>Symbol (fish and tree) Symbol (fish and tree)</p>
<ul style="list-style-type: none"><li>· <b>Special precautions for user</b></li><li>· <b>Danger code (Kemler):</b></li><li>· <b>EMS Number:</b></li><li>· <b>Stowage Category</b></li><li>· <b>Stowage Code</b></li></ul>	<p>Warning: Miscellaneous dangerous substances and articles 60 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"><li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li></ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"><li>· <b>Transport/Additional information:</b></li><li>· <b>DOT</b></li><li>· <b>Remarks:</b></li></ul>	<p>Special marking with the symbol (fish and tree).</p>
<ul style="list-style-type: none"><li>· <b>TDG</b></li><li>· <b>Excepted quantities (EQ)</b></li></ul>	<p>Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"><li>· <b>UN "Model Regulation":</b></li></ul>	<p>UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (CLOROFENE), 9, III</p>

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is not listed.
- **GHS label elements**  
The substance is classified and labeled according to the Globally Harmonized System (GHS).

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**Hazard pictograms**

GHS05 GHS07 GHS08 GHS09

**Signal word** *Danger***Hazard statements**

- H302+H332 Harmful if swallowed or if inhaled.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to the kidneys through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P321 Specific treatment (see on this label).  
P330 Rinse mouth.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, we cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. We warrant that the chemical meets the specifications set forth on the label. We (LGC/VHG/ARMI) disclaim any other warranties, expressed or implied with regard to the product supplied hereunder, its merchantability or its fitness for a particular purpose. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. Read all precautionary information.

**Date of preparation / last revision** 05/25/2018 / -

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**· Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**P: Marine Pollutant**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**WHMIS: Workplace Hazardous Materials Information System (Canada)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative***· Sources**

*Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.*

- Data compared to the previous version altered. All sections have been updated.**

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