

1 Identification

Product identifier

Product name: **Phenol-d1**

Stock number: H51100

CAS Number:
1003-66-3

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 2 H310 Fatal in contact with skin.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

STOT RE 2 H373 May cause damage to the kidneys, the liver, the bladder, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS05 GHS06 GHS08

Signal word Danger

Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H373 May cause damage to the kidneys, the liver, the bladder, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P320 Specific treatment is urgent (see on this label).

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

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

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

E - Corrosive material



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 2 Health (acute effects) = 2

FIRE 1 Flammability = 1

REACTIVITY 1 Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

Product name: Phenol-d1	
vPvB: Not applicable.	(Contd. of page 1)
3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 1003-66-3 Phenol-d1	
4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration. After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Do not induce vomiting; immediately call for medical help. Information for doctor Most important symptoms and effects, both acute and delayed Causes severe skin burns. Causes serious eye damage. Indication of any immediate medical attention and special treatment needed No further relevant information available.	
5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.	
6 Accidental release measures Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Use neutralizing agent. Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. 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 Handle under dry protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Open and handle container with care. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Store away from air. Store in the dark. Further information about storage conditions: Store under dry inert gas. This product is air sensitive. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from exposure to light. Specific end use(s) No further relevant information available.	
8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: Phenol ACGIH TLV ppm 5 (skin); Not classifiable as a human carcinogen Austria MAK 5 (skin) Belgium TWA 5 (skin)	

Product name: **Phenol-d1**

(Contd. of page 2)

Denmark TWA 1 (skin)
Finland TWA 5; 10-STEL (skin)
France VME 5 (skin)
Germany MAK 5 (skin)
Hungary TWA 4 mg/m3; 8 mg/m3-STEL (skin)
Japan OEL 5 (skin)
Korea TLV 5 (skin)
Netherlands MAC-TGG 5 (skin)
Norway TWA 1
Poland TWA 10 mg/m3; 20 mg/m3-STEL
Russia TWA 5; 0.3-STEL (skin)
Sweden NGV 1; 2-KTV (skin)
Switzerland MAK-W 5; 10-KZG-W (skin)
United Kingdom TWA 5; 10-STEL (skin)
USA PEL 5 (skin)

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use self-contained respiratory protective device in emergency situations.

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes) Not determined

Eye protection:

Tightly sealed goggles

Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Solid
Color: Light pink
Odor: Not determined
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: 40-42 °C (104-108 °F)
Boiling point/Boiling range: 182 °C (360 °F)
Sublimation temperature / start: Not determined

Flash point: Not applicable
Flammability (solid, gaseous): Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined
Upper: Not determined
Vapor pressure: Not applicable.
Density at 20 °C (68 °F): 1.082 g/cm³ (9.029 lbs/gal)
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with
Water: Not determined
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
Other information No further relevant information available.

10 Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Conditions to avoid No further relevant information available.

Incompatible materials:

Oxidizing agents

Air

Light

Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects

Acute toxicity:



Fatal if inhaled.

(Contd. on page 4)
USA

Product name: Phenol-d1	(Contd. of page 3)
<p>Fatal in contact with skin. Fatal if swallowed. Danger through skin absorption. Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes severe skin burns. Eye irritation or corrosion: Causes serious eye damage. Sensitization: No sensitizing effects known. Germ cell mutagenicity: Suspected of causing genetic defects. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: May cause damage to the kidneys, the liver, the bladder, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: Phenol is strongly irritating to skin, eyes and mucous membranes. It is rapidly absorbed through the skin and such absorption may result in death. Solutions are equally hazardous. Exposure may also result in damage to the kidneys, liver, pancreas, spleen and lungs. Headache, dizziness, muscle weakness, dimness of vision, ringing in the ears, irregular breathing, weak pulse, nausea vomiting, abdominal pain are symptoms of exposure by inhalation or ingestion. Since phenol is so corrosive it also causes damage to the GI tract. Phenol is an experimental carcinogen. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.</p>	

12 Ecological information
<p>Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow product to reach ground water, water course or sewage system. Do not allow material to be released to the environment without proper governmental permits. Danger to drinking water if even small quantities leak into the ground. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.</p>

13 Disposal considerations
<p>Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.</p>

14 Transport information	
UN-Number DOT, IMDG, IATA	UN1671
UN proper shipping name DOT IMDG, IATA	Phenol, solid PHENOL, SOLID
Transport hazard class(es) DOT  Class Label Class Label IMDG, IATA  Class Label	 6.1 Toxic substances. 6.1 6.1 (T2) Toxic substances 6.1 6.1 Toxic substances. 6.1
Packing group DOT, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user EMS Number:	Warning: Toxic substances F-A,S-A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	UN1671, Phenol, solid, 6.1, II

15 Regulatory information
<p>Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)</p>
(Contd. on page 5) USA

Product name: Phenol-d1

(Contd. of page 4)

Hazard pictograms



GHS05 GHS06 GHS08

Signal word *Danger*

Hazard statements

H300+H310+H330 *Fatal if swallowed, in contact with skin or if inhaled.*

H314 *Causes severe skin burns and eye damage.*

H341 *Suspected of causing genetic defects.*

H373 *May cause damage to the kidneys, the liver, the bladder, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.*

Precautionary statements

P260 *Do not breathe dust/fume/gas/mist/vapours/spray.*

P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...*

P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

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

P320 *Specific treatment is urgent (see on this label).*

P361 *Take off immediately all contaminated clothing.*

P405 *Store locked up.*

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

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation / last revision 11/23/2015 / -

Abbreviations and acronyms:

RID: Règlement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)