

**1 Identification of substance:**

**Product details:**  
**Product name:** 1-Naphthol  
 A11862  
 102729

**Manufacturer/Supplier:**  
 Alfa Aesar, A Johnson Matthey Company  
 Johnson Matthey Catalog Company, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Emergency Phone: (978) 521-6300  
 CHEMTREC: (800) 424-9300  
 Web Site: www.alfa.com


**Information Department:** Health, Safety and Environmental Department  
**Emergency information:**  
 During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

**2 Composition/Data on components:**

**Chemical characterization:**  
**Description: (CAS#)**  
 1-Naphthol (CAS# 90-15-3)  
**Identification number(s):**  
**EINECS Number:** 201-069-4  
**Index number:** 604-028-00-5

**3 Hazards identification**

**Hazard description:**




**Information pertaining to particular dangers for man and environment**  
 R 21/22 Harmful in contact with skin and if swallowed.  
 R 37/38 Irritating to respiratory system and skin.  
 R 41 Risk of serious damage to eyes.

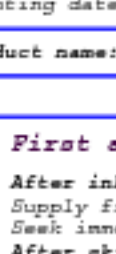
**Classification system**  
**HMIS ratings (scale 0-4)**  
 (Hazardous Materials Identification System)

HEALTH	2	Health (acute effects) = 2
FIRE	1	Flammability = 1
REACTIVITY	1	Reactivity = 1

**GHS label elements**



**Danger**  
 3.1/3 - Toxic in contact with skin.  
 3.1/4 - Harmful if swallowed.  
 3.2/2 - Causes skin irritation.  
 3.6/3 - May cause respiratory irritation.



**Danger**  
 3.3/1 - Causes serious eye damage.

**Prevention:**  
 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Wear protective gloves and eye/face protection.

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

**Product name:** 1-Naphthol

**4 First aid measures**

**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:**  
 Rinses opened eyes for several minutes under running water. Then consult a doctor. After swallowing Seek immediate medical advice.

**5 Fire fighting measures**

**Suitable extinguishing agents:**  
 Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the material, its products of combustion or resulting gases:**  
 In case of fire, the following can be released:  
 Carbon monoxide and carbon dioxide

**Protective equipment:**  
 Wear self-contained respirator.  
 Wear fully protective impervious suit.

**6 Accidental release measures**

**Person-related safety precautions:**  
 Wear protective equipment. Keep unprotected persons away.  
 Ensure adequate ventilation

**Measures for environmental protection:**  
 Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**  
 Dispose contaminated material as waste according to item 13.  
 Ensure adequate ventilation.

**Additional information:**  
 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**  
**Information for safe handling:**  
 Handle under dry protective gas.  
 Keep containers tightly sealed.  
 Store in cool, dry place in tightly closed containers.  
 Ensure good ventilation at the workplace.  
 Prevent formation of dust.  
**Information about protection against explosions and fires:** Keep ignition sources away.

**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.  
 Keep containers tightly sealed.  
 Store in cool, dry conditions in well sealed containers.  
 Protect from exposure to light.  
 This product is air sensitive.

**8 Exposure controls and 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.

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

**Additional information:** No data

**Product name:** 1-Naphthol

**Personal protective equipment**

**General protective and hygienic measures**  
 The usual precautionary measures for handling chemicals should be followed.  
 Avoid contact with the skin.  
 Avoid contact with the eyes and skin.  
**Breathing equipment:** Use suitable respirator when high concentrations are present.

**Protection of hands:**  
 Impervious gloves  
 Check protective gloves prior to each use for their proper condition.

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

**Eye protection:**  
 Safety glasses  
 Tightly sealed goggles

**Body protection:** Protective work clothing.

**9 Physical and chemical properties:**

General Information	
Form:	Flakes
Color:	Light brown
Odor:	Phenol-like
<b>Change in condition</b>	
Melting point/Melting range:	94-97°C (201-207°F)
Boiling point/Boiling range:	278-280°C (532-536°F)
Sublimation temperature / start:	Not determined
Flash point:	125°C (257°F)
Ignition temperature:	510°C (950°F)
Decomposition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
Lower:	0.8 Vol %
Upper:	5 Vol %
Vapor pressure:	Not determined
Density at 20°C (68°F):	1.28 g/cm³
Solubility in / Miscibility with Water at 20°C (68°F):	0.1 g/l

**10 Stability and reactivity**

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

**Materials to be avoided:**  
 Light  
 Oxidizing agents

**Air**  
 Dangerous reactions No dangerous reactions known

**Dangerous products of decomposition:** Carbon monoxide and carbon dioxide

**11 Toxicological information**

**Acute toxicity:**

LD/LC50 values that are relevant for classification:		
Oral	LD50	275 mg/kg (mouse)
		1870 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)
Inhalative	LC50/1H	>420 mg/m³/1H (rat)
Irritation of skin	severe	500 mg/24H (rabbit)
Irritation of eyes	severe	1 mg (rabbit)

**Product name:** 1-Naphthol

**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:** No sensitizing effects known.

**Other information (about experimental toxicology):**  
 Reproductive effects have been observed on tests with laboratory animals.

**Subacute to chronic toxicity:**  
 Ingestion of naphthol may cause nephritis, vomiting, diarrhea, circulatory collapse, anemia, convulsions and death. It may be absorbed through the skin and kidney injury may result from that exposure. It is a severe irritant and will injure the eyes on contact.

**Subacute to chronic toxicity:**  
 The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:  
 Liver - other changes.  
 Liver - changes in liver weight.  
 Liver - liver function tests impaired.  
 Kidney, Ureter, Bladder - other changes.  
 Kidney, Ureter, Bladder - urine volume increased.  
 Kidney, Ureter, Bladder - proteinuria.  
 Nutritional and Gross Metabolic - weight loss or decreased weight gain.  
 Blood - changes in spleen.  
 Brain and Coverings - other degenerative changes.  
 Behavioral - anemias (general depressed activity).  
 Endocrine - changes in spleen weight.  
 Reproductive - Fertility - litter size (e.g. # fetuses per litter; measured before birth).  
 Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g. a stunted fetus).

**Additional toxicological information:**  
 To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
 Danger through skin absorption.  
 No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:**

**General notes:**  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations**

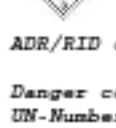
**Product:**  
 Recommendation Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packaging:**  
 Recommendation: Disposal must be made according to official regulations.

**14 Transport information**

Not a hazardous material for transportation.

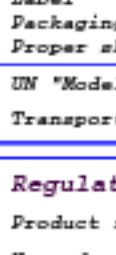
**DOT regulations:**



**Hazard class:** 6.1  
**Identification number:** UN2811  
**Packing group:** III  
**Proper shipping name (technical name):** TOXIC SOLID, ORGANIC, N.O.S. (1-Naphthol)  
**Label:** 6.1

**Product name:** 1-Naphthol

**Land transport ADR/RID (cross-border)**



**ADR/RID class:** 6.1 (2) Toxic substances  
 None

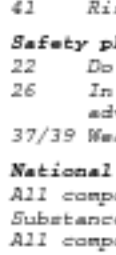
**Danger code (Kamler):** 60

**UN-Number:** 2811

**Packing group:** III

**Description of goods:** 2811 TOXIC SOLID, ORGANIC, N.O.S. (1-Naphthol)

**Maritime transport IMDG:**



**IMDG Class:** 6.1  
 None

**UN Number:** 2811

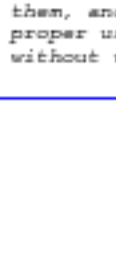
**Label:** 6.1

**Packing group:** III

**Marine pollutant:** No

**Proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S. (1-Naphthol)

**Air transport ICAO-TI and IATA-DGR:**



**ICAO/IATA Class:** 6.1  
 None

**UN/ID Number:** 2811

**Label:** 6.1

**Packing group:** III

**Proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S. (1-Naphthol)

**UN Model Regulation:** UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, III

**Transport/Additional information:** Not dangerous according to the above specifications.

**15 Regulations**

**Product related hazard informations:**  
**Hazard symbols:**  
 Xn Harmful

**Risk phrases:**  
 21/22 Harmful in contact with skin and if swallowed.  
 37/38 Irritating to respiratory system and skin.  
 41 Risk of serious damage to eyes.

**Safety phrases:**  
 22 Do not breathe dust.  
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 37/39 Wear suitable gloves and eye/face protection.

**National regulations**  
 All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance inventory.  
 All components of this product are listed on the Canadian Domestic Substances List (DSL).  
**Information about limitation of use:** For use only by technically qualified individuals.

**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

**Product name:** 1-Naphthol

**Data Sheet, or in combination with any other product or process, is the responsibility of the user.**

**Contact:** Zedelius Holt

**Abbreviations and acronyms:**  
 ADR: Accord européen sur le transport des marchandises dangereuses par route (European agreement concerning the international carriage of dangerous goods by road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (regulations concerning the international transport of dangerous goods by rail)  
 IMO: International Maritime Organization  
 IATA: International Air Transport Association  
 IATA-TI: International Air Transport Association (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical instructions by the International Civil Aviation Organization (ICAO)  
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals  
 SDBS: European inventory of existing commercial chemical substances  
 OSHA: Chemical Abstracts Service (Division of the American Chemical Society)  
 HMIS: Hazardous Materials Identification System (OSHA)  
 OSHA: OSHA concentration, as percent  
 OSHA: OSHA dose, as percent