

Material Safety Data Sheet

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Version 1.4
According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name A-NAPHTHOL SIGMA-ALDRICH ULTRA, MINIMUM 99%
Product Number N2780
Company Sigma-Aldrich Pty. Ltd.
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
1-NAPHTHOL	90-15-3	201-969-4	604-029-00-5
Formula	C10H8O		
Molecular Weight	144.17 AMU		
Synonyms	Basf Ursol ERN * C.I. 76605 * C.I. Oxidation Base 33 * Durafur developer D * Fouramine ERN * Fourrine 99 * Fourrine ERN * Furro ER * alpha-Hydroxynaphthalene * 1-Hydroxynaphthalene * Nako TRB * 1-Naphthalenol * alpha-Naphthol * Tertral ERN * Ursol ERN * Zoba ERN		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

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.

AFTER INGESTION

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

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

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

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES 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.

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.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Store in a cool dry place. Store under nitrogen.

SPECIAL REQUIREMENTS: Store under inert gas. Air and light sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Mechanical exhaust required. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Physical State: Solid

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	278 - 280 °C	760 mmHg
MP/MP Range	95 °C	
Flash Point	125 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	542 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 0.8 % Upper: 5 %	
Vapor Pressure	1.7 mmHg	100 °C
SG/Density	N/A	
Partition Coefficient	Log Kow: 2.85	
Viscosity	N/A	
Vapor Density	4.5 g/l	120 °C
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Other Solvents: VERY SOLUBLE IN ETHANOL, ETHER SOLUBLE IN ACETONE FREELY SOLUBLE IN BENZENE ALKALI	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: QL2800000

ACUTE TOXICITY

LD50

Oral

Rat

1870 mg/kg

LC50

Inhalation

Rat

> 420 mg/m³

1H

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Gastrointestinal: Changes in structure or function of salivary glands.

LD50
Intraperitoneal
Rat
250 MG/KG

LD50
Oral
Mouse
275 mg/kg

LD50
Oral
Cat
134 mg/kg

LD50
Oral
Rabbit
9000 mg/kg

LD50
Skin
Rabbit
880 mg/kg

LD50
Oral
Guinea pig
2000 mg/kg

IRRITATION DATA

Skin
Rabbit
500 mg
24H
Remarks: Severe irritation effect

Skin
Rabbit
550 mg
Remarks: Open irritation test

Eyes
Rabbit
1 mg
Remarks: Severe irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes severe skin irritation.
Skin Absorption: Harmful if absorbed through skin.
Eye Contact: Causes severe eye irritation.
Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful

if inhaled.
Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION
Eyes. Liver. Kidneys. Blood.

CHRONIC EXPOSURE - MUTAGEN

ZNEG
Histidine reversion (Ames)

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Mouse
Dose: 90 MG/KG
Route of Application: Subcutaneous
Exposure Time: (6-14D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type: EC50 Algae
Time: 50 - 72 h
Value: 8 - 65 mg/l

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: 96 h
Value: 4.1 - 4.70 mg/l

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

Inhalation Packing Group I: No

Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 604-029-00-5

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 21/22 37/38 41

Harmful in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes.

S-PHRASES: 22 26 37/39

Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 2

16 - Other Information

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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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