



8210 N. Austin Avenue, Morton Grove, IL 60053-0519, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: 4-Chloro-1-naphthol
 Code: 511635

..... **MATERIAL SAFETY DATA SHEET**

SECTION 1 PRODUCT IDENTIFICATION

Name: 4-Chloro-1-naphthol
 Code: 511635

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS.....

Synonyms

4-Chloro-alpha-naphthol; 1-hydroxy-4-chloronaphthalene; 4-chloro-1-hydroxynaphthalene; 4-chloro-1-naphthalenol

CAS #: 604-44-4

MF: C₁₀H₇ClO

Ingredients

	<i>Concentration (%)</i>
4-Chloro-1-naphthol (604-44-4).....	NLT 97.0%
Manufacturing Impurities	NMT 3.0%

SECTION 3 HAZARDS IDENTIFICATION

See Sections 8 and 11 for further details.

..... **Emergency Overview**

NFPA Ratings (Scale 0-4); Health = 1; Fire = 1; Reactivity = 0

Solid: White to gray needle-like crystals or powder
 The properties of this material have not been fully investigated. Use due caution in handling and use of this material.
 Potential thermal decomposition products: oxides of carbon, hydrogen chloride gas
 Standard chemical handling precautions: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.
 May be irritating to eyes, skin, mucous membranes, and upper respiratory tract.
 May be harmful if swallowed, inhaled, or absorbed through skin.
 Target organs: None.
 See Sections 4, 5, 6, 8, 9, and 10.

Other Hazard Information

Primary Route(s) of Entry: Ingestion, inhalation, skin or eye contact.
 Eye: May be irritating.
 Skin: May be irritating.
 Inhalation: May be irritating to respiratory system.
 Ingestion: May be irritating to digestive system.
 Acute: No exposure limit has been established and limited toxicological information is available. However, dust may be irritating to eyes, skin, mucous membranes, and upper respiratory tract. Dust may be harmful if swallowed, inhaled, or absorbed through the skin.
 Chronic: No information is available.
Preexisting conditions aggravated: Not determined.
Symptoms: See above route.
 See Section 11 for additional toxicological data.



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SECTION 4 FIRST AID MEASURES.....

Eye contact: Immediately flush eyes with copious amounts of water or eyewash solution for at least 15 minutes; lift eyelids occasionally; consult physician.
 Skin contact: Immediately remove contaminated clothing and shoes, then wash skin with soap and copious amounts of water. If irritation persists, consult physician.
 Inhalation: Remove to fresh air. If not breathing, give artificial respiration and keep person warm and at rest. If breathing is difficult, give oxygen; consult physician.
 Ingestion: Wash out mouth with water provided person is conscious; consult physician; DO NOT induce vomiting without first consulting physician.
Wash contaminated clothing before reuse.
 Physician note: Symptomatic and supportive care. No specific antidote. Treatment based on physician judgment in response to reactions of the patient.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point:	NA	Method:	NA	Flammable Limits:	upper: U lower: U
	Autoignition:		NA		
NFPA Flammability Class:	NA			bp:	NA
OSHA Flammability Class:	NA			mp:	~244-249°F (118-121°C)

Extinguishing Media

Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Special Fire Fighting Procedures

None

Standard Fire and Explosion Hazards

Slight fire hazard--As with most organic compounds, fire is possible at elevated temperatures or from contact with an ignition source.

Explosion potential unknown--If a substance is an organic solid, fine dust dispersed in air in sufficient concentrations in the presence of an ignition source is a potential for a dust explosion.

Avoid inhalation of material or combustion by-products.

Unusual Fire and Explosion Hazards

None

Possible Hazardous Combustion or Decomposition Products

carbon monoxide, carbon dioxide, hydrogen chloride gas

SECTION 6 ACCIDENTAL RELEASE MEASURES.....

Water Release

Standard chemical precautions: Keep out of water supplies and sewers.

Occupational Release

Eliminate all ignition sources/slight fire hazard.

Evacuate unnecessary people from area. Isolate spilled material. Ventilate area.

Wear protective clothing to prevent contact with skin and eyes (lab coat, gloves, safety glasses).

Wear NIOSH/MSHA approved respirator for dust to prevent potential inhalation irritation.

If in solution, mix with sand or similar adsorbent material.

Sweep up, seal in appropriate hazardous waste container, and hold for proper waste disposal.

Avoid raising dust as it is a powdered material.

Wash spill site after material pickup is complete.

Standard chemical precautions: Keep out of water supplies and sewers.

Abbreviations: NA—not applicable; NE—not established; U—unknown/not available; NL—not listed; N—no; Y—yes.; NDA—No data available.



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SECTION 7 HANDLING AND STORAGE.....

General Handling Measures

See Section 8 Below.

General Storage Measures

Store in a cool, dry place with adequate ventilation.

Minimize dust.

Avoid ignition and heat sources.

Special Handling Instructions

None

Special Storage Instructions

None

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Personal Protective Equipment (PPE)

Chemical safety eyewear.

Compatible chemical-resistant gloves.

NIOSH/MSHA approved respirator for dust.

Protective Clothing (e.g., lab coat)

Other Safety Equipment and Engineering Preventive Measures

Safety shower and eye wash.

Mechanical exhaust required.

General Precautions and Handling Measures

Avoid ingestion, inhalation and contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure. Wash thoroughly after handling.

Wash contaminated clothing before reuse. Discard contaminated footwear.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Chemical Family: halogenated aromatic alcohol

Use: analytical reagent

Appearance, Odor, and Other Properties

white to gray needle-like crystals or powder

MP: ~ 244-249°F (~118-121°C)

bp: NA

VP (mmHg): NA

% Volatiles: NA

Evap. Rate: NA

Vapor Density: NA

Odor: none

FW: 178.6

Solubility in Water: negligible

Water Reactive: no

Specific Gravity: NE

Refractive Index: NA

Octanol/Water (K_{OW}): NE

SECTION 10 STABILITY AND REACTIVITY

Stability

Stable at normal temperature and pressure. As with most organic compounds, fire is possible at elevated temperatures or by contact with an ignition source.

Incompatibilities

Strong oxidizing agents

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Standard Precautions

- Avoid incompatibilities.
- Avoid heat, flames, sparks, and other ignition sources.
- Avoid generating dust.
- Keep out of water supplies and sewers.

Special Precautions

None.

Possible Hazardous Combustion or Decomposition Products

carbon monoxide, carbon dioxide, hydrogen chloride gas

Hazardous Polymerization

None.

SECTION 11 TOXICOLOGICAL INFORMATION

RTECS #: NE Class Identifier: NE

Toxicity Data

No data available

Acute Effects

No exposure limit has been established and limited toxicological information is available. However, may be irritating to eyes, skin, mucous membranes, and upper respiratory tract. May be harmful if swallowed, inhaled, or absorbed through the skin.

Chronic Effects

No exposure limit established and limited toxicological information is available.

Carcinogen Status:

- OSHA: NL
- NTP: NL
- IARC: NL

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

SECTION 12 ECOLOGICAL INFORMATION

Data not yet available. Standard chemical precautions: Keep out of water supplies and sewers.

SECTION 13 DISPOSAL CONSIDERATIONS

Small/large quantities:

Collect waste and, lab pack or dissolve in an appropriate solvent, then **dispose of in accordance with all Federal, State, and local environmental regulations.**

SECTION 14 TRANSPORT INFORMATION

The following is a summary only. Check regulations for complete information:

U. S. Department of Transportation (49 CFR 172.101):

This material is not listed in the 49 CFR 172 and can be considered safe for transport.



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SECTION 15 REGULATORY INFORMATION

Reviews, Standards, and Regulations

- TSCA:..... Y
- EINECS:..... Y (210-068-5)
- CERCLA [Section 103 (40 CFR 302.4)]:..... NL
- OSHA Process Safety [29 CFR 1910.119]:..... NL
- California Proposition 65:..... NL
- SARA Title III Notification [40 CFR 302.4]:
 - Section 302 (EHS) Ingredient [40 CFR 355.3]..... NL
 - Section 313 Ingredient [40 CFR 372.65]..... NL
 - Section 304 (CERCLA and EHS) Ingredient [40 CFR 355.4]..... NL

Hazard Classes

Sara	Acute	Chronic	Fire	Pressure	Reactivity
Title III	Y	N	N	N	N
	Health	Flammability	Reactivity	Special Hazards	
NFPA	1	1	0	none	
HMIS	1	1	0	none	

Risk Symbol:

Xi Irritant.

Risk Phrases:

The properties of this material has not been fully investigated
 R36/37/38..... May be irritating to eyes, respiratory system and skin.

Safety Phrases:

- S03/09/14 Keep in a cool, well-ventilated place, away from strong oxidizers.
- S7 Keep container tightly closed.
- S22 Do not breathe dust.
- S24/25 Avoid contact with skin and eyes.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S36/37/39 Wear suitable protective clothing, gloves, and eye/face protection (i.e., lab coats, compatible chemical-resistant gloves, and chemical safety eyewear)

SECTION 16 OTHER INFORMATION

This MSDS was revised as follows:

This was put into a new format, so consider all sections to be new.

Disclaimer

The health and toxicological hazards of this compound have not been fully investigated; therefore, this substance must be handled by, or under close supervision of those qualified in the handling and use of potentially hazardous substances in industrial situations.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Regis Technologies, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Approved of by: M. Bryce-Fritts

This is the last page of this MSDS.

Reviewed and re-approved of with minor changes to the abbreviations in the footer and format.

by: Jon Pilli

08/05/2008

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