



NORLAND PRODUCTS INCORPORATED

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SAFETY DATA SHEET

For information or emergency: Telephone 609-395-1966

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1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

83H	TRADE NAME: Norland Optical Adhesive
Curing Adhesive	TRADE CODE: NOA 83H PRODUCT USE: Ultraviolet and Heat
100	COMPANY: Norland Products Inc 2540 Route 130, Bdg.
1966	Cranbury, NJ 08512 USA Telephone (609) 395- Telefax (609) 395-9006

2. HAZARDS IDENTIFICATION

- 1 Health H302/H317/H320
Mercapto-ester
 - 1 Flammability
Mercapto-ester
 - 1 Reactivity
Benzophenone
 - B Protective equipment
-
- Hazard Rating
 - 4 Extreme 1 Slight
 - 3 Serious 0 Minimal
 - 2 Moderate

- B Glove and Eye

- protection

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Health risks:

H 302 Harmful if swallowed

H 317 May cause an allergic skin reaction

H 320 Causes eye irritation

Pictogram



Signal Word: Warning

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Nature: Urethane related based formulation

COMPONENTS	CAS#	EINECS #	CONCENTRATION
Mercapto-ester*	*	*	30-50%
Mercapto-ester*	*	*	35-60%
Benzophenone	119-61-9	204-337-6	0.1-3%

* The specific chemical identity and concentration is being withheld from this data sheet as a Trade Secret.

4. FIRST AID MEASURES

In case of inhalation: If tightness in the chest, irritation or coughing occurs, remove to fresh air. Get medical attention if symptoms persist.

In case of splashes in eye: If the material gets in the eyes, immediately wash the eyes with copious amounts of water, occasionally lifting the lower and upper eyelids. Continue for 15 minutes and get medical attention immediately.

In case of skin contact: If the material gets on the skin, immediately wash the area with soap and water and flush with water. If irritation develops get medical attention.

In case of clothing spattering: Discard or wash contaminated clothing before reuse.

In case of ingestion: If the material has been swallowed, dilute with milk or water if the victim is alert. See doctor as soon as possible.

5. FIRE-FIGHTING MEASURES

Extinguishing Media recommended: Carbon Dioxide, foam, dry chemical

Extinguishing Media inadvisable: Water. Jets of water from fire hose.

Special Hazards: None.

Hazardous decomposition/combustion products: Could generate carbon monoxide, carbon dioxide, sulfur dioxide or hydrogen sulfide.

Special protective equipment: A self-contained breathing apparatus.

Explosion Data:

Sensitivity to Impact: None

Sensitivity to Static Discharge: None

6. ACCIDENTAL RELEASE MEASURES

Measures for personal safety:

GLOVES: Use gloves made from an impervious material, e.g. nitrile, butyl or latex rubber. Latex rubber may soften and become pervious if also exposed to organic solvents.

RESPIRATOR: Not required under normal operating conditions. Respiratory protection may be needed in unusual circumstances where significant exposure to fumes or mists can occur. A NIOSH approved air purifying respirator with an organic vapor cartridge would then be recommended. Use must comply with OSHA (29 CFR 1910.134) and other regulatory standards.

EYE: Wear safety glasses.

FOOTWEAR: Impervious shoes, e.g. leather, not cloth or sandals.

Ventilation Requirements:

A fume hood is not generally required. The room should have adequate ventilation to avoid potential for concentration of mist or vapors.

Environmental measures:

Stop the product from entering the drainage system and the natural environment. Limit leakage with earth.

Cleaning methods:

Recovery: Absorb material with paper towel or other absorbent. Place in container for disposal. If possible, expose absorbed resin to UV light or sunlight to solidify the resin.

Cleaning/decontamination: Clean up with soap and water.

Elimination: Eliminate according to local and national regulations.

7. HANDLING AND STORAGE

Handling:

Technical measures: Do not reuse container. This product is for industrial use only. Practice good housekeeping and vigorous personal hygiene to minimize contact with material.

Precautions to take: Avoid contact with skin and eyes.

Storage: Store at 5°C to 25°C. Keep away from sunlight.

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Precautionary Measure: None.

Exposure limits: None.

Protective personal equipment:

Respiratory protection: Not needed with normal use.

Protection for hands: Use gloves made from an impervious material, e.g. nitrile, butyl or latex rubber. Latex rubber may soften and become pervious if also exposed to organic solvents.

Eye Protection: Wear safety glasses.

Protection from skin: Wear clothing that provides protection to skin.

9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Color: Clear liquid

Odor: Slight sulfur odor

pH: Not applicable

Melting point: Not applicable

Boiling point: Not applicable

Decomposition temperature: >300°C

Flash point: 175°C

Auto ignition temperature: Not applicable

Explosive properties: None

Oxidizing properties: None

Vapor pressure: <0.1 @ 20°C

Density: >1

Solubility/Miscibility:

Solubility in water Not miscible

Viscosity: 250 cps @ 25°C

10: STABILITY AND REACTIVITY

Conditions to avoid: Keep away from UV and sunlight. Temperatures above 65°C may cause exothermic nonhazardous polymerization.

Substances to avoid: None

Hazardous decomposition products: None

11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Ingestion: LD50: >5 g/kg (rats)

Inhalation: LC50: >2.5 mg/l/hr

Local effects:

On skin: slight irritating to skin.

On eyes: irritating to eyes.

Long term toxicity:

Skin contact: May cause sensitization by skin contact.

12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available.

Mobility: Cured adhesives are immobile.

General ecological: Do not empty liquid into drains or ground water.

13: DISPOSAL CONSIDERATION

Disposal Methods for product and waste: Send to authorized disposal plants or for incineration under controlled conditions.

Disposal methods for contaminated packaging: Do not reuse package. Send to authorized disposal plants or for incineration under controlled conditions.

You should comply with the local and national regulations in force when disposing.

14: TRANSPORTATION INFORMATION

Land transport (ADR/RID)

Not classified as dangerous in the meaning of land transport regulations(ADR/RID).

Shipping transport(IMD)

Not classified as dangerous in the meaning of shipping transport regulations(IMDG).

Air transport (IATA)

Not classified as dangerous in the meaning of air transport regulations(IATA).

15: REGULATORY INFORMATION

Symbols:

Xi Irritant**H phrases:**

- H 302 Harmful if swallowed
- H 317 May cause an allergic skin reaction
- H 320 Causes eye irritation

S phrases:

- S24 Avoid contact with skin.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.
- S37 Wear suitable gloves.

Contains:

Urethane related adhesives.

US Federal Regulations:

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below.

Europe (EINECS/ELINCS)	Listed/registered
USA (TSCA)	Listed/registered
Canada (DSL)	Listed/registered
Australia (AICS)	Listed/registered
Japan (MITI)	Listed/registered
Korea (TCCL)	Listed/registered
Philippines (PICCS)	Listed/registered
China	Listed/registered

16: OTHER INFORMATION

Custom Situation: Harmonized System (HTS/Schedule B) 3506.91.0000

All components of this product are in compliance with the Toxic Substances Control Act (TSCA) inventory.

The information included in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used combination with any other materials or in any process, unless specified in the test.