



# MATERIAL SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

**UV9C2261**  
**LIQUID STEEL**

North America:  
**NOR-COTE INTERNATIONAL, INC.**  
506 Lafayette Avenue  
Crawfordsville, Indiana 47933  
United States  
Phone: 765-362-9180 (day phone)  
MSDS Issuer: EHS Department  
**Emergency Phone:**  
**CHEMTREC (United States)**  
**800-424-9300**

Europe:  
**NOR-COTE INTERNATIONAL LTD.**  
Unit 8 Warrior Park, Eagle Close  
Chandlers Ford Industrial Estate  
Eastleigh, Hampshire  
SO53 4NF England  
Tel: +44 (0) 23 80270542 (day phone)  
**Emergency Phone:**  
**CHEMTREC (Outside U.S.)**  
**703-527-3887**

Asia:  
**NOR-COTE INTERNATIONAL PTE. LTD.**  
768 North Bridge Road  
Singapore 198736  
Tel: +65 6291-0898 (day phone)

## SECTION 2 INGREDIENTS

CHEMICAL NAME	PERCENT BY WEIGHT	CAS#	EXPOSURE LIMITS	EINECS#
Proprietary Monomers	10-12%	Proprietary	Not Established	Proprietary
Proprietary Oligomers	10-12%	Proprietary	Not Established	Proprietary
1,6 Hexanediol Diacrylate	10-12%	13048-33-4	Not established	235-921-9
Proprietary Photoinitiators	2-4%	Proprietary	Not Established	Proprietary
Oxide of Iron (Magnetite)	<62%	Not available	Not established	Not available

## SECTION 3 HAZARDS IDENTIFICATION

**ROUTES OF ENTRY:** Dermal, Inhalation, Ingestion

**GENERAL HEALTH EFFECTS:** Irritant to skin, eyes and respiratory tract. Effects may be delayed for several hours.

### ACUTE:

- **Skin Contact:** Potential irritant and can cause allergic skin reaction. Repeated or prolonged contact may cause sensitization.
- **Eye Contact:** Liquid, vapors, or mists may cause eye irritation. Protect eyes from repeated or prolonged contact.
- **Inhalation:** May cause irritation to upper respiratory tract upon prolonged or repeated inhalation.
- **Ingestion:** May be harmful if swallowed. Gastrointestinal tract irritation may result.

**CHRONIC:** No data available

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Lung conditions, sensitization, allergies, skin and eye conditions.

**HMIS ® RATING:** Health - 2 Flammability - 1 Physical Hazard - 1 PPE - C

### EC HAZARD SYMBOLS:



Xi - IRRITANT



N - DANGEROUS TO THE ENVIRONMENT

### EC RISK/SAFETY PHRASES:

R36/37/38, R43, R51/53  
S24, S37, S61

## SECTION 4 FIRST AID MEASURES

**SKIN CONTACT:** Remove and isolate contaminated clothing and shoes. Remove excess material from skin with clean cloth. Flush skin with running lukewarm water. Wash affected areas using mild soap.

**EYE CONTACT:** Flush the eye and under lids with warm water for 15 minutes. Remove any contact lenses during the flushing. Get immediate medical attention if symptoms persist.

**INHALATION:** Move subject to fresh air and keep warm. If subject is not breathing, administer artificial respiration. If breathing is difficult, have qualified personnel administer oxygen and get medical attention.

**INGESTION:** If appreciable quantities are swallowed, seek immediate medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

## SECTION 5 FIRE FIGHTING MEASURES

**FLASHPOINT:** Not tested but expected to be >200° F (> 93.3°C)

**FLAMMABLE/EXPLOSIVE LIMITS (Volume % in air):** Not established

**EXTINGUISHING METHOD:** Water fog, carbon dioxide (CO2) or dry chemical

**AUTO-IGNITION TEMPERATURE:** Not established



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Evacuate area of all non-emergency personnel. Fire fighters must wear full emergency equipment with self-contained breathing apparatus. At elevated temperatures hazardous polymerization may occur causing container rupture and in extreme cases, explosion. Fight fires from upwind and cool intact containers with water spray or stream at maximum range.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition and ventilate area. Avoid skin and eye contact. Use respiratory protection. Absorb with inert materials such as dry clay or sand and place in closed container for disposal as solid waste in accordance with all applicable regulations.

## SECTION 7 HANDLING AND STORAGE

**HANDLING:** Avoid any unnecessary contact. Use protective clothing specified in Section 8.

**STORAGE:** Store away from heat and sunlight to prevent spontaneous polymerization. Store below 120° F (49° C). Protect containers from physical damage. Storage of containers should conform to flammable and combustible liquid regulations.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**HAND PROTECTION:** Use nitrile, butyl or other gloves that are resistant to chemicals in Section 2. Replace immediately if punctured or torn or when a change of appearance (color, elasticity, shape) occurs.

**EYE PROTECTION:** Use splash-proof safety goggles, safety glasses, or face shields that are ANSI approved to prevent eye contact. Eyewash availability is also recommended.

**SKIN PROTECTION:** Protective or disposable outer clothing is recommended.

**RESPIRATORY PROTECTION:** Use local exhaust to control vapors and mists. Use of NIOSH approved respirators for organic vapors, is recommended where TLV is exceeded.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR:** Moderate viscosity with mild odor

**BOILING POINT (°F):** Not available

**SPECIFIC GRAVITY:** Not established

**VAPOR PRESSURE (mm Hg):** Not established

**SOLUBILITY IN WATER:** Not soluble

**pH:** Not available

**PHYSICAL STATE:** Liquid

**FREEZING POINT:** Not available

**EVAPORATION RATE:** <1

**VAPOR DENSITY:** Heavier than air

**VOC:** Negligible as supplied

## SECTION 10 REACTIVITY / STABILITY HAZARD DATA

**STABILITY:** This material is stable under recommended storage and handling conditions.

**CONDITIONS TO AVOID:** Excessive heat, ignition sources and contamination with dirt and other foreign materials.

**INCOMPATIBILITY:** Avoid contamination or inappropriate mixing with strong oxidizing agents, peroxides, strongly caustic materials and metal corrosion products including rust. Do not expose to UV light during storage.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal oxidation or pyrolysis (as in fire) may yield carbon dioxide, carbon monoxide and volatile organic fragments which are flammable, irritating or toxic.

**HAZARDOUS POLYMERIZATION:** Under certain conditions (excess temperatures and contamination) hazardous polymerization may occur. Avoid high temperature and contamination with foreign materials.

## SECTION 11 TOXICOLOGICAL INFORMATION

No determination has been made on the toxicological impact of this product.

HDODA, one component of this product, was positive in a mouse lymphoma test indicating possible mutagenic potential. An Ames test for mutagenicity produced equivocal results. An 80 week carcinogenicity study in mice showed no increased incidence of tumors. In general, acrylates are not active in the Ames mutagenesis assay, but are positive in the mouse lymphoma assay. The specificity of the mouse genotoxic response from acrylates is subject to discussion and may be an aberrant response of the test system. HDODA was not fetotoxic or teratogenic when administered orally to mice at a maternally toxic dose.

## SECTION 12 ECOLOGICAL INFORMATION

No determination has been made on ecological impact. However, it is highly recommended to prevent contamination of the environment with this product, i.e. soil, landfills, drains, sewers, surface waters, etc.



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## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of this product in accordance with all applicable laws and regulations.

## SECTION 14 TRANSPORTATION INFORMATION

Transport this product in accordance with all applicable laws and regulations. This product, as supplied, is not regulated nor classified as a hazardous material/dangerous good by United States Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the Canadian Transportation of Dangerous Goods Act (TDG), or the International Air Transport Association (IATA).

## SECTION 15 REGULATORY INFORMATION

This Material Safety Data Sheet has been formatted to the best of our ability in accordance with American National Standards Institute (ANSI), European Communities (EC), and contains hazard criteria and all information required by the Canadian Controlled Products Regulation (CPR) in regard to this product.

**Occupational Safety and Health Act (OSHA):** This product is classified as Class III B.

### Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III:

**Section 302 – Extremely Hazardous Substances (EHS):** This product is not regulated as an EHS.

**Section 304 - CERCLA:** This product is not regulated for emergency release notification.

**Section 311/312 – Hazard Communication Standard (HCS):** This product is classified as an acute hazard.

**Superfund Amendments and Reauthorization Act of 1986 (SARA):** This product contains the following components that are regulated under Title III Section 313: None Known

**Toxic Substances Control Act (TSCA) Section 8(b) – Inventory Status:** All chemicals in this product are TSCA listed or exempt from being listed.

## SECTION 16 OTHER INFORMATION

**HMIS® ratings** are a registered trade and service mark of the National Paint and Coatings Association with the following scale:

* = Chronic health effect	PPE Index
4 = Severe Hazard	A = Safety Glasses
3 = Serious Hazard	B = Safety Glasses and Gloves
2 = Moderate Hazard	C = Safety Glasses, Gloves and Protective Apron
1 = Slight Hazard	D = Face Shield, Gloves and Protective Apron
0 = Minimal Hazard	E = Safety Glasses, Gloves and Respirator

### EU Risk/Safety Phrases

R20/21/22 = Harmful by inhalation, in contact with skin or if swallowed.

R36/37 = Irritating to eyes, respiratory system.

R43 = May cause sensitization by skin contact.

R51/53 = Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S20/21 = When using, do not eat, drink, or smoke.

S23 = Do not breathe vapour.

S24 = Avoid contact with skin.

S26 = In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 = Wear suitable protective clothing and gloves

S61 = Avoid release to the environment. Refer to special instructions/safety data sheets.

### Definitions

TLV – Threshold Limit Value

CAS# - Chemical Abstract Service Number

NTP – National Toxicology Program

PEL – Permissible Exposure Limit

IARC - International Agency for Research on Cancer

ANSI – American National Standards Institute

AIHA – American Industrial Hygiene Association

WEEL – Workplace Environmental Exposure Level

**Disclaimer:** To the best of our knowledge, the product information contained herein is based upon data believed to be reliable, however Nor-Cote makes no warranty and disclaims any liability whatsoever for its accuracy or completeness. Since the actual use of the product is beyond our control, no guarantee expressed or implied, is made by Nor-Cote as to the effects of such uses nor does Nor-Cote assume liability arising out of the use of this product by others. It remains the responsibility of the user to ensure that the use of the product herein is in accordance with all applicable laws and regulations.