



SAFETY DATA SHEET

Prepared in accordance with OSHA 29 CFR 1910.1200

Revision Date: 5/20/2014

SDS No.: ND4262

Version: 3.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 250 Light Cure Adhesive

Synonyms: VT250

Use of the Substance/Preparation: UV/Light cured adhesive

Supplier:

ND Industries, Inc.
1893 Barrett Road
Troy, Michigan 48084
Tel: (248) 288-0000
Fax: 248) 288-0022
E-mail: info@ndindustries.com
Website: www.ndindustries.com

Emergency Telephone Number: 24 hr. EMERGENCY CHEMTREC 1-800-424-9300
24 hr. CHEMTREC INTERNATIONAL +1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification of Chemical in Accordance 29 CFR 1910.1200

Classification of Mixture

OSHA Classification:

Acute Toxicity, Oral (Category 4)
Acute Toxicity, Dermal (Category 3)
Carcinogenicity (Category 2)
Irritant, Skin (Category 2)
Irritant, Eye (Category 2)
STOT - Single Exposure (Category 3)
STOT - Repeated Exposure (Category 2)

GHS Classification:

Acute Toxicity, Oral (Category 4)
Acute Toxicity, Dermal (Category 3)
Carcinogenicity (Category 2)
Irritant, Skin (Category 2)
Irritant, Eye (Category 2)
STOT - Single Exposure (Category 3)
STOT - Repeated Exposure (Category 2)

OSHA / GHS Label Elements, including precautionary statements

Pictogram:



Signal word: **Danger**

Hazard Statement(s)

- H302 - Harmful if swallowed
- H311 - Toxic in contact with skin
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H351 - Suspected of causing cancer
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

- P201 - Obtain special instruction before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust.
- P261 - Avoid breathing dust, fume, gas, mist, vapors or spray.
- P264 - Wash face, hands and any exposed skin thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only in a well-ventilated area.
- P280 - Wear protective gloves, clothing, eye protection or face protection.
- P281 - Use personal protective equipment as required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	EINECS Number	Weight %	EU Classification*
Acrylate oligomer	Proprietary	NA	50-60	None
Glycol diacrylate	84170-74-1	NA	15-25	None
Epoxy acrylate blend	Mixture	NA	10-20	None
N-vinylpyrrolidone	88-12-0	201-800-4	5-15	Carc. 2 Acute Tox. 4 * Acute Tox. 4 * Acute Tox. 4 * STOT RE 2 * STOT SE 3 Eye Dam. 1
Photochemical	mixture	NA	1-5	None

**EU Classification is for pure concentrations of the individual materials only, and represents classification under EU regulations. It does not represent the mixture itself.*

4. FIRST AID MEASURES

- Skin Contact:** Remove contaminated clothing. Flush affected area with soap and plenty of water for at least 15 minutes. If irritation develops or persists, seek medical attention.
- Eye Contact:** Flush eyes with warm water for at least 20 minutes. Hold eyelids apart to ensure complete irrigation of the eyes. Remove contact lenses. Seek immediate medical attention.
- Inhalation:** Move to fresh air. If breathing is difficult provide oxygen. If not breathing, immediately begin rescue breathing. If heart has stopped, provide cardiopulmonary resuscitation (CPR). Seek immediate medical attention.
- Ingestion:** Do not induce vomiting. If vomiting occurs spontaneously, place head lower than knees, or, if unconscious, in rescue position. Seek immediate medical attention.

Notes to Physician: Maintain adequate ventilation and oxygenation of patient.

5. FIRE AND IGNITION INFORMATION

Flash Point	>200°F
Explosion Limits in Air – Upper (%):	Not established for the product itself.
Explosion Limits in Air – Lower (%):	Not established for the product itself.
OSHA Flammability Classification:	Non-combustible
Auto-ignition Temperature:	Not established for the product itself.
Extinguishing Media:	Dry chemical, carbon dioxide, foam
Special Protective Equipment for Firefighters:	Fire fighters should wear full turn-out gear, including a NIOSH approved self-contained breathing apparatus operated in pressure-demand or other positive pressure when fighting fires.
Specific Hazards:	None
Hazardous Decomposition and/or Combustion Products:	Oxides of carbon, smoke, fumes, unburned hydrocarbons, aldehydes, and cyanides.
Risk of Dust Explosion:	Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Only trained personnel should clean a spill. Ventilate spill area. Avoid breathing vapors, eye and skin contact. Wear appropriate personal protective equipment.
Methods for Cleaning Up:	Evacuate non-emergency personnel. Isolate the area and prevent access. Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Transfer to a waste container. Scrape-up/off dried materials. The waste can then be disposed of in accordance with all applicable local, state, and federal regulations. Ensure adequate ventilation.
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
Environmental Precautions:	Do not allow spilled material onto or into soil, drains, sewer, rivers or other water courses.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid skin and eye contact. Wear appropriate personal protective equipment. Avoid breathing vapors. Work in a well-ventilated area. Do not ingest. Safety showers and eyewash stations should be available for use in the immediate work area. Wash hands after using this product, and before eating, drinking smoking or using the lavatory.
Conditions for Safe Storage:	Store in well ventilated, cool, dry location, away from direct sunlight. Keep containers tightly closed when not in use. Do not allow product to freeze.
Incompatible Materials:	Oxidizing materials

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Exposure Limits for the Product itself have not been established.

Exposure limits for those components with limits are stated below.

N-Vinyl-2-pyrrolidone, CAS RN: 8-12-0 ACGIH – TLV: 0.05 ppm

ENGINEERING CONTROLS: Use only with adequate ventilation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) stated above. The use of both general dilution and local exhaust ventilation is recommended to control airborne exposures to mist, vapor, or spray. Do not use in a confined area or areas with little or no air movement.

PERSONAL PROTECTIVE EQUIPMENT

- Respiratory Protection:** When atmospheric levels may exceed the exposure guideline, use a NIOSH approved air-purifying respirator. Use a respirator that has been selected by an industrial hygienist or other technically qualified person for the specific work conditions. If respirators are used, OSHA requires compliance with its respirator program. For situations where atmospheric levels may exceed the level for which an air-purifying respirator is effective, use positive-pressure air-supplying respiratory (air-line or self-contained breathing apparatus).
- Hand Protection:** Use gloves chemically resistant to this material. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment.
- Eye Protection:** Wear safety glasses with side shields. Chemical safety goggles and face shield should be used if splash hazard exists. Eyewash fountain should be located in the immediate work area.
- Skin and Body Protection:** Wear chemical resistant clothing suitable to the job. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment.
- Other:** A hazard assessment should be performed before using this material to determine the appropriate personal protective equipment for the task. Safety shower and eyewash stations should be available in the immediate work area. Do not smoke, eat or drink while using this material. Wash hands after using this material, before eating, drinking, smoking or using the lavatory.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Clear, viscous liquid
- Odor:** Not established for the product itself.
- pH** Not established for the product itself.
- Odor Threshold:** Not established for the product itself.
- Vapor Pressure:** Not established for the product itself.
- Vapor Density:** Not established for the product itself.
- Flash Point** >200°F
- Explosion Limits in Air – Upper (%):** Not established for the product itself.
- Explosion Limits in Air – Lower (%):** Not established for the product itself.

OSHA Flammability

Classification:

Auto-ignition Temperature: Not established for the product itself.

Decomposition

Temperature: Not established for the product itself.

Initial Boiling Point /Range: Not established for the product itself.

Melting Point: Not established for the product itself.

Freezing Point: Not established for the product itself.

Water Solubility: Not established for the product itself.

Specific Gravity: Not established for the product itself.

Relative Density: Not established for the product itself.

% Volatile (by Volume): Not established for the product itself.

Evaporation Rate: Not established for the product itself.

Partition coefficient: n-octanol/water Not established for the product itself.

Viscosity: Not established for the product itself.

10. STABILITY AND REACTIVITY

Stability: Stable under recommended conditions. See section 7.

Hazardous Polymerization: Will not occur.

Mechanical Sensitivity (shock): Not applicable.

Conditions to Avoid: Avoid heat, sparks, open flames, or other ignition sources. Avoid oxidizers. Do not allow exposure to light. Do not allow material to freeze.

Hazardous Decomposition and/or Combustion Products: See section 5.

Static Discharge Effects: Not Applicable

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Skin Contact, Eye Contact

Signs and Symptoms of Exposure: Contact with the skin can be indicated by redness and/or irritation at the sight of exposure. Contact with the eye(s) is indicated by irritation, redness and watering of the eye(s).

Toxicological data has not been established for the product itself.

Components of this material that have associated toxicological data is provided below.

Acute Toxicity

Oral LD50:	N-vinylpyrrolidone: 1470 mg/kg (rat) Photochemical: >1694 mg/kg (rat)
Inhalation LC50:	No data available on the product itself.
Dermal LC50:	N-vinylpyrrolidone: 560 mg/kg (rabbit) Photochemical: 6930 mg/kg (rat)

Serious Eye Damage/Eye Irritation: N-vinylpyrrolidone: Severe eye irritation (rabbit)

Skin Corrosion/Irritation: No data available on the product itself.

Respiratory or Skin Sensitization: N-vinylpyrrolidone: May cause respiratory irritation

Germ Cell Mutagenicity: No data available on the product itself.

Carcinogenicity

ACGIH: The N-vinylpyrrolidone component of this product is present at levels greater than or equal to 0.1% and is identified as a TLV-A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans by the ACGIH.

IARC: The N-vinylpyrrolidone component of this product is present at levels greater than or equal to 0.1% and is identified as a Group 3 : Not classifiable as to its carcinogenicity to humans by the IARC.

NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available on the product itself.

Teratogenicity: No data available on the product itself.

Specific Target Organ Toxicity – Single Exposure: May cause damage to organs.
May cause respiratory irritation.

Specific Target Organ Toxicity – Repeated Exposure: No data available on the product itself.

Aspiration Hazard: No data available on the product itself.

Synergistic Materials: No data available on the product itself.

12. ECOLOGICAL INFORMATION

Information given is based on data on the components and the toxicology of similar products.

Aquatic Toxicity: Do not allow spilled material onto or into soil, drains, sewer, rivers or other water courses.

Environmental Fate:

Mobility: No data available on the product itself.
 Bioaccumulation: No data available on the product itself.
 Persistence/Degradability: No data available on the product itself.
 Distribution to Environmental Compartments: No data available on the product itself.

13. DISPOSAL CONSIDERATIONS

Disposal:

Disposal of this product must be in accordance with all applicable local, state, and federal regulatory requirements. When disposing of waste materials contact and offer to only licensed professional waste disposal services. Do not dispose of used, unused, or wastes into sanitary sewage or storm water drains or systems.

RCRA Classification (40 CFR 261):

Dispose of in accordance with all applicable local, state and federal regulatory requirements.

Unused and Uncontaminated Product:

Dispose of in accordance with all applicable local, state, and federal regulatory requirements.

Disclaimer:

Information in this section pertains to the product as shipped in its intended composition as described in Section 2 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations.

14. TRANSPORTATION INFORMATION

DOT: Regulated

UN Identification Number: UN2810
 Proper Shipping Name: Toxic, liquids, organic, n.o.s. (1-Vinyl-2-pyrrolidone)
 Hazard Class: 6.1
 Packing Group: III
 Marine Pollutant: No
 Poison Inhalation Hazard: No

IATA: Regulated

UN Identification Number: UN2810
 Proper Shipping Name: Toxic, liquids, organic, n.o.s. (1-Vinyl-2-pyrrolidone)
 Hazard Class: 6.1
 Packing Group: III

IMDG: Regulated

UN Identification Number: UN2810
 Proper Shipping Name: Toxic, liquids, organic, n.o.s. (1-Vinyl-2-pyrrolidone)
 Hazard Class: 6.1
 Packing Group: III
 Marine Pollutant: No
 EMS-No: F-A, S-A

15. REGULATORY INFORMATION

Hazard Classification

OSHA Classification: Hazardous

- Acute Toxicity, Oral (Category 4)
- Acute Toxicity, Dermal (Category 3)
- Carcinogenicity (Category 2)
- Irritant, Skin (Category 2)
- Irritant, Eye (Category 2)
- STOT - Single Exposure (Category 3)
- STOT - Repeated Exposure (Category 2)

International Inventories

All components of this product are listed on or exempt from the following inventories:

- No - Australian Inventory of Chemical Substances (AICS)
- No - Domestic Substances List (DSL)
- Yes - Chinese Inventory
- Yes - European Inventory of Existing Commercial Substances (EINECS)
- Yes - Japanese Existing and New Chemical Substances (ENCS)
- No - Korean Existing Chemicals List (KECL)
- No - New Zealand Hazardous Substances and New Organisms Act (HSNO)
- No - Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- Yes - United States Toxic Substances Control Act (TSCA) Inventory

A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

U.S. Federal Regulations

TSCA 12(b) Export Notification: None

Clean Air Act amendments of 1990 (CAA, Section 11240: CFR 82): No

Component	CAS #	Amount
NA	NA	NA

Clean Water Act (CWA, 40 CFR 116): No Priority Pollutants

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302): No

Component	CAS #	RQ
NA	NA	NA

Superfund Amendments and Reauthorization Act, Title III (SARA):

SARA Section 302 (40 CFR 355) Extremely Hazardous Substances: No

Component	CAS #	Amount
NA	NA	NA

SARA Section 311/312 (40 CFR 370) Hazard Category: Acute Health Hazard, Chronic Health Hazard

SARA Section 313 (40 CFR 372) Toxics Release Inventory: No

Component	CAS #	Amount
NA	NA	NA

U.S. State Regulations

California Proposition 65: This product does not contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Component	CAS #	Amount
NA	NA	NA

16. OTHER INFORMATION

HMIS Rating

HMIS Index: *- chronic, 0 – Minimal, 1 – slight, 2- moderate, 3 – serious, 4 –severe

Health: 3
Flammability: 1
Physical Hazard: 2

Additional Contacts:

Prepared by: ND Industries, Inc. – Safety, Health and Environmental Affaires
Version: 3.1
Revision Date: 5/20/2014
Previous Revision
Date: None
Reasons for Revision: **Creation of SDS**

Glossary

ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Service Number
 Ceiling: Absolute exposure limit that should not be exceeded at any time
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
 GHS: Globally Harmonized System
 HCS U.S. Hazard Communications Standard
 IARC: International Agency for Research on Cancer
 IATA: International Air Transportation Association
 IDLH: Immediately Dangerous to Life and Health
 IMDG: International Maritime Dangerous Goods Code
 DOT: U.S. Department of Transportation
 OSHA: Occupational Safety and Health Administration
 NTP: U.S. National Toxicology Program
 PEL: Permissible Exposure Limit - An airborne concentration in which nearly all workers may be repeatedly exposed ... without adverse health effects. Establish by US OSHA
 ppm: Parts per million
 RCRA: Resource Conservation and Recovery Act
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit - One time exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day
 TSCA: Toxic Substances Control Act
 TLV: Threshold Limit Value - An airborne concentration in which nearly all workers may be repeatedly exposed ... without adverse health effects. Established by US ACGIH
 TWA: Time Weighted Average - Average exposure on the basis of a 8h/day, 40h/week work schedule

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