



MATERIAL SAFETY DATA SHEET



Prepared in accordance with ISO 11014-1/ ANSI standard
Z400.1-2004

Revision Date: 12/26/2012
MSDS No.: ND4157

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 294 Light Cure Adhesive

Synonyms: None

Use of the Substance/Preparation: UV plastic bonder / Adhesive

Supplier:

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW-Warning: Light yellow liquid. Toxic. Harmful in contact with skin and if swallowed. Toxic by inhalation. Unstable upon depletion of inhibitor. Causes skin and eye irritation. May cause sensitization by skin contact. May cause respiratory tract irritation.

Principle Routes of Exposure: Skin, eyes and inhalation.

POTENTIAL HEALTH EFFECTS:

Eye Contact: Causes eye irritation.
Skin Contact: Harmful in contact with skin. Causes skin irritation.
Ingestion: Not expected to be a route of entry under normal industrial use conditions. Harmful if swallowed.
Inhalation: Toxic by inhalation. May cause respiratory tract irritation.
Carcinogenic Effects: No data available. Suspect carcinogen: N-Vinyl-2-Pyrrolidone.
Target Organ Effects: No data available. Target organ NNDMA: Nerves, Target organ Curing Agent: Liver, kidney, blood, testicular.
Medical Conditions Aggravated by Exposure: No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	EINECS Number	Weight %	EU Classification
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Urethane acrylate	Mixture	n/a	40-45	None
N, N-Dimethylacrylamide	2680-03-7	220-237-5	25-30	T: R21/22; R23; R36
Isobornyl Methacrylate	7534-94-3	231-403-1	15-20	None
N-Vinyl-2- Pyrrolidone	88-12-0	201-800-4	10-15	Xn: R20/21/22; R37; R40; R41
Curing Agent	Mixture	n/a	5-10	Xn: R36; R51

4. FIRST AID MEASURES

Skin Contact: Wash affected area with plenty of soap and water. Continue rinsing for at least 15 minutes. Remove contaminated clothing immediately. If irritation develops seek medical attention.

Eye Contact: Rinse opened eyes thoroughly, for at least 20 minutes. Seek medical attention.

Inhalation: Remove to fresh air. If not breathing, provide artificial respiration. If breathing is difficult, provide oxygen. Seek medical attention.

Ingestion: Rinse mouth with water. DO NOT INDUCE VOMITING. Seek immediate medical attention.

Notes to Physician: Treatment of exposure should be directed at the control of the symptoms and the clinical condition of the patient.

5. FIRE AND IGNITION INFORMATION

Flash Point Not determined.

Explosion Limits in Air – Upper (%): Not determined.

Explosion Limits in Air – Lower (%): Not determined.

Auto-ignition Temperature: Not determined.

Extinguishing Media: Dry chemical, carbon dioxide, water spray or fog.

Special Protective Equipment for Firefighters: Fire fighters should wear full protective gear including self contained breathing apparatus.

Specific Hazards: Avoid high pressure water jet. Closed containers may rupture at fire temperatures/runaway polymerization.

Hazardous Decomposition and/or Combustion Products: Burning may produce toxic combustion products.

Risk of Dust Explosion: Not applicable as supplied.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Only trained personnel should clean a spill. Ensure adequate ventilation. Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid breathing vapors.

Methods for Cleaning Up: Absorb with inert material. Use neutralizing agent. Collect material into suitable container for disposal.

Environmental Precautions: Do not allow product to reach ground water, watercourses or sewage system. Do not release product to the environment.

7. HANDLING AND STORAGE

Handling: Keep container tightly closed when not in use. Use with adequate ventilation. Wear appropriate personal protective equipment when working with this material. Avoid contact with skin and eyes. Avoid breathing vapors. Light sensitive.

Storage: Store in a cool, dry, well ventilated location, away direct sunlight. Avoid ignition sources.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

No exposure limits have been established for this product.
Component exposure limit:

1-Vinyl-2-Pyrrolidone: US ACGIH - TLV: 0.05 ppm TWA (skin)

TLV: Threshold Limit Value

TWA: Time Weighted Average

US ACGIH: United States American Conference of Governmental Industrial Hygienists

US OSHA: United States Occupational Safety and Health Administration

ENGINEERING CONTROLS

General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to lowest feasible level when limits have not been established) during the use of this product.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: If ventilation is not adequate to maintain exposure below limits stated above use NIOSH approved respiratory protection.

Hand Protection: Wear chemical impervious gloves.

Eye Protection: Wear chemical splash goggles, and full face shield.

Skin and Body Protection: Wear impervious clothing to avoid skin contact.

Other: Safety shower 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow liquid.
Odor:	Acrylate odor.
pH	Not established.
Vapor Pressure:	Not established.
Boiling Point/Range:	Not established.
Melting Point/Range:	Not established.
Water Solubility:	Negligible.
Density:	Not established.
Specific Gravity:	1.05
% Volatile (by Volume):	Not established.
Evaporation Rate:	Not established.
Viscosity:	Not established.

10. STABILITY AND REACTIVITY

Stability: Stable.

Hazardous Polymerization: May occur.

Conditions to Avoid: Avoid exposure to UV light sources. Avoid flames, heat and ignition sources. Avoid temperatures higher than 140°F (60°C). Protect from direct sunlight. Avoid loss of polymerization inhibitor. Avoid free radical producing initiators, contact with

peroxides, reactive metals, and alkalis. Contact with listed items will produce an exothermic reaction with the product. Contact with them should be avoided.

Static Discharge Effects:

Use proper bonding and grounding when working with this product.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral LD50: No data available on this product
Inhalation LC50: No data available on this product
Dermal LC50: No data available on this product
Eye Irritation: No data available on this product
Skin Irritation: No data available on this product

CHRONIC TOXICITY

Carcinogenic Effects: No data available on this product
Mutagenic Effects: No data available on this product
Reproductive Toxicity: No data available on this product
Sensitizing Effects: No data available on this product
Synergistic Materials: No data available on this product

12. ECOLOGICAL INFORMATION

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

Aquatic Toxicity: No data on product itself. Do not allow product to reach ground water, watercourses or sewage system. Do not release product to the environment.

ENVIRONMENTAL FATE

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

13. DISPOSAL CONSIDERATIONS

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.

RCRA Classification (40 CFR 261): Disposal of waste that contains this product should be in accordance with applicable regional, national and local laws and regulations via a licensed waste disposal contractor.

Unused and Uncontaminated Product: Dispose of surplus and non-recyclable product should be in accordance with applicable regional, national and local laws and regulations via a licensed waste disposal contractor.

14. TRANSPORTATION INFORMATION

DOT:
Shipping Name: Toxic, Liquids, Organic, N.O.S. (N, N-Dimethylacrylamide, 1-Vinyl-2-Pyrrolidone)
Identification: UN2810

Hazard Class: 6.1

Packing Group: III

15. REGULATORY INFORMATION

Hazard Classification

United States – OSHA (29 CFR 1910.1200): This product is classified as hazardous under OSHA's Hazard Communication Standard.

Mexico – NOM-018-STPS: Not established.

Canada – WHMIS Classification (CPR, SOR/88-66): Not established.

International Inventories

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

- (yes) - Domestic Substances List (DSL)
- (yes) - European Inventory of Existing Commercial Substances (EINECS)
- (yes) - United States Toxic Substances Control Act (TSCA) Inventory

U.S. Federal Regulations

TSCA 12(b) Export Notification: Not required.

Clean Air Act amendments of 1990 (CAA, Section 11240: CFR 82): This product does not contain any Hazardous Air Pollutants.

Clean Water Act (CWA, 40 CFR 116): This product does not contain any priority pollutants.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302): None.

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

SARA Section 302 (40 CFR 355) Extremely Hazardous Substances: This product does not contain any EHS.

SARA Section 313 (40 CFR 372) Toxics Release Inventory: None.

Pharmaceutical Information: Not permitted.

U.S. State Regulations

California Proposition 65: This product does not contain any chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS Rating

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

Health: *3

Flammability: 2

Physical Hazard: 1

Additional Contacts:

Prepared by: ND Industries, Inc. – Safety, Health and Environmental Affairs

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Reasons for Revision:

Update Section 3

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