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Version 1

1. IDENTIFICATION**Product identifier****Product Name** Ultrabond 46662**Other means of identification****Product Code** MS-46662**UN/ID no.** None**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** UV Adhesive.**Uses advised against** None known**Details of the supplier of the safety data sheet****Manufacturer Address**Hernon Manufacturing Inc.
121 Tech Drive
Sanford, FL 32771
800-527-0004**Emergency telephone number****Company Phone Number** 407-322-4000**Emergency Telephone** Chemtel 800-255-3924**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 4

Label elements**Emergency Overview****Danger****Hazard statements**

Harmful if swallowed

Harmful if inhaled

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure
Combustible liquid



Appearance No information available

Physical state liquid

Odor mild

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful in contact with skin
Toxic to aquatic life with long lasting effects
Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%	Trade Secret
Urethane Acrylate	MIXTURE	30 - 60	*
ISOBORNYL ACRYLATE	5888-33-5	10 - 30	*
N-VINYL-2- PYRROLIDINONE	88-12-0	10 - 30	*

Hydrophobic Amorphous Fumed Silic	67762-90-7	3 - 7	*
1-hydroxy-cyclohexyl-phenylketone	947-19-3	1 - 5	*
SILANE	2530-83-8	1 - 5	*
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	162881-26-7	0.1 - 1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO_x).

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 7 and 29 °C.

Incompatible materials Strong acids. Strong bases. Oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
N-VINYL-2- PYRROLIDINONE 88-12-0	TWA: 0.05 ppm	-	-

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing. Use rubber or plastic gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid	Odor	Mild
Appearance	No information available	Odor threshold	No information available
Color	Light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Does not apply	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 149 °C / 300 °F	
Flash point	> 93 °C / 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	> 1	
Relative density	1.27	
Water solubility	Low	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Incompatible materials.

Incompatible materials

Strong acids. Strong bases. Oxidizers.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information****Inhalation**

May cause irritation of respiratory tract.

Eye contact	Avoid contact with eyes.
Skin contact	Avoid contact with skin.
Ingestion	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
ISOBORNYL ACRYLATE 5888-33-5	= 4890 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
N-VINYL-2- PYRROLIDINONE 88-12-0	= 830 mg/kg (Rat)	= 560 mg/kg (Rabbit)	= 3.07 mg/L (Rat) 4 h
SILANE 2530-83-8	= 22600 µL/kg (Rat)	= 3970 µL/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
N-VINYL-2- PYRROLIDINONE 88-12-0	A3	Group 3	-	-

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 1,628.00 mg/kg

ATEmix (dermal) 2,017.00 mg/kg

ATEmix (inhalation-dust/mist) 3.60 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Crustacea
N-VINYL-2- PYRROLIDINONE 88-12-0	780: 72 h Desmodesmus subspicatus mg/L EC50	-	45: 48 h Daphnia species mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

Chemical Name	Partition coefficient
N-VINYL-2- PYRROLIDINONE 88-12-0	0.4

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
UN/ID no.	None
Proper shipping name	Not regulated
Hazard Class	None
Packing Group	None
Special Provisions	None

<u>IATA</u>	Not regulated
UN/ID no.	None
Proper shipping name	Not regulated
Hazard Class	None
Packing Group	None
Special Provisions	None

<u>IMDG</u>	Not regulated
UN/ID no.	None
Proper shipping name	Not regulated
Hazard Class	None
Packing Group	None
Special Provisions	None
Marine pollutant	None

<u>RID</u>	Not regulated
UN/ID no.	None
Proper shipping name	Not regulated
Hazard Class	None
Packing Group	None
Special Provisions	None

<u>ADR</u>	Not regulated
UN/ID no.	None
Proper shipping name	Not regulated
Hazard Class	None
Packing Group	None

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

All ingredients are on the inventory or are exempt from listing.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2*	Flammability 1	Physical hazards 1	Personal protection X

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Disclaimer

The information provided in this Material 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 a 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 in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet