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SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product Name:	**VIBESET VSA2080 PART A (RESIN)**
Revision Date:	**11/24/2017**
Revision Number:	**1**

1. IDENTIFICATION

Product Name:	VIBESET VSA2080 PART A (RESIN)
General Use:	Polyurethane Isocyanate
Chemical Family:	Isocyanate-terminated Prepolymer
Product Use:	For industrial and professional use only. This material is used for the production of cast polyurethane elastomers and should not be used for spray systems.
Supplier Details:	**Thermoset Solutions, LLC**

Emergency Phone : **CHEMTREC US 1-800-424-9300**

2. HAZARDS IDENTIFICATION

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not a dangerous substance according to GHS.

GHS Precautionary Statements:

P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P260 – Do not breathe fumes, mist and vapors.
P264 – Wash skin and face thoroughly after handling.
P271 – Use only outdoors or in a well ventilated area.
P272 – Contaminated work clothing should not be allowed out of the workplace.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P284 – In case of inadequate ventilation, wear respiratory protection.
P303+352 – IF ON SKIN (or hair): Wash with plenty of soap and water.
P304+340 – IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 – IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+313 – IF exposed or concerned: Get medical advice/attention.
P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
P314 – Get medical advice/attention if you feel unwell.
P333+311 – If skin irritation occurs: Call a POISON CENTER or doctor/physician.
P337+311 – If eye irritation persists: Call a POISON CENTER or doctor/physician.
P342 – If experiencing respiratory symptoms: Call a doctor or emergency medical facility (i.e. 911)

P362 – Take off contaminated clothing and wash before reuse.
P403+233 – Store in a well ventilated place. Keep container tightly closed.
P405 – Store locked up.
P501 – Dispose of contents/container in accordance with federal/state/local regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

Contains isocyanates. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema. Long term exposure due to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath, and difficulty breathing. Animal test indicate that skin contact may a role in causing respiratory sensitization.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS NO.	Chemical name	Concentration (%)
Proprietary	Polyurethane Prepolymer	80 - 100 %
68515-49-1	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	10 - 30 %

4. FIRST AID MEASURES

Inhalation: Move to an area free from further exposure. Extreme asthmatic reactions may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek immediate medical attention.

Skin: Flush skin with plenty of water for at least 5 minutes while removing contaminated clothing and shoes. Wash thoroughly with soap and water. Get medical attention if irritation or rash develops on affected area. Wash clothing before reuse.

Ingestion: Call a physician immediately. Rinse mouth and drink plenty of water. Do not induce vomiting. Remove stomach contents only as directed by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms / effects Acute: Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a pre-existing, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm, and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible. Causes skin irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove. Contact with isocyanate can cause discoloration. Causes eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing. May cause irritation of the digestive tract. Symptoms may include abdominal pain, nausea, vomiting, and diarrhea. Delayed symptoms affecting the respiratory tract can also occur several hours after overexposure.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Suitable media includes water spray, foam, carbon dioxide, or dry chemical.

Recommendations: Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires. Cool fire exposed containers with water spray. Remove containers from the fire area if possible. Do not release runoff from fire control methods to sewers or waterways.

Hazards: Nitrous gasses, fumes/smoke, isocyanate, vapor

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Evacuate personnel. Wear suitable PPE as described in section 8.

Environmental precautions: Prevent migration into groundwater, sewers, or streams. Land spills may require excavation of contaminated soil. Material should not be released into the environment.

Methods for cleaning up: **Small Amounts:** Absorb isocyanate with suitable absorbent material (see 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to well ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90% water, 8% concentrated ammonia, 2% detergent. Add at a 10:1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.
Large Amounts: If temporary control of isocyanate vapour is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.
Residues: The following measures should be taken for final clean-up: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes. Dike spillage.

7. HANDLING AND STORAGE

General: Mix thoroughly before use.
Handling: Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over open containers. Avoid open container exposure to damp air. Avoid breathing aerosols, mists, and vapors. Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.
Storage: Store material at ambient temperatures (18°C – 29°C) and pressure. Keep away from sources of direct heat and moisture. Keep container tightly closed when not in use, and seal with nitrogen blanket. Moisture contamination may evolve carbon dioxide gas, which may cause containers to pressurize. Material is stable under normal conditions. Segregate from bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Provide local exhaust ventilation to keep airborne concentrations below the recommended occupational exposure limits.

Personal Protective Equipment: HMIS PP, C: Safety Glasses, Gloves, Apron
Type of protection (Minimum Suggested Equipment)
Hand: Chemical resistant gloves (i.e. nitrile, latex, butyl rubber)
Eye: Safety glasses with side shields or safety goggles
Skin: Impervious clothing, including but not limited to apron, full body suit, chemical resistant shoes or shoe covers. Use long sleeves at a minimum.
Respiratory: If concentrations are above the occupational exposure limits, an approved respirator should be used (air purifying or air supplied)
Additional: Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

Components with workplace control parameters:

Component	USA.ACGIH (TLV)	USA.OSHA – TABLE Z-1 1910.
Polyurethane Prepolymer	NE	NE
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	NE	NE

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow
Physical State: Liquid
Odor Threshold: Slight aromatic odor
Particle Size: No data available
Specific Gravity: 1.09
Viscosity: 3000 Centipoise at 25°C (77°F)
Boiling Point: No data available
Flammability: N/A
Partition Coefficient: No data available
Vapor Pressure: 0.00001 mm Hg at 25°C (77°F)
PH: No data available
Evap. Rate: No data available
Decomp. Temp.: No data available
Odor: Slight aromatic odor
Solubility: Not soluble in water, Reacts with water
Freezing/Melting Pt: No data available
Flash Point: >200°F (Closed Cup)
Vapor Density: No data available
Auto-Ignition Temp: No data available
UFL/LFL: No data available

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal ambient conditions of temperature and pressure.
Conditions to Avoid: Avoid moisture, extreme temperatures, and contact with incompatible materials.
Materials to Avoid: Water, alcohols, amines, strong oxidizing agents, and strong bases.
Hazardous Decomposition: Hydrogen cyanide, carbon oxides, nitrogen oxides, and isocyanate vapors.
Hazardous Polymerization: No dangerous reactions will occur under normal use/storage conditions. Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.

11. TOXICOLOGICAL INFORMATION

Chemical Name	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Polyurethane Prepolymer	NE	NE	NE
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	>10 g/kg	>3.16 g/kg	> 0.3 mg/l

Toxicity Data for Toluene Diisocyanate (TDI)
Skin Irritation: rabbit, Draize Test, Moderate irritation
Eye Irritation: rabbit, Draize, Severe irritation
Sensitization: Dermal, Category 1A (guinea pig)
Respiratory sensitization: Category 1A (guinea pig)
Mutagenicity: No data available.
Carcinogenicity: No data available.

12. ECOLOGICAL INFORMATION

Ecological Data for Toluene Diisocyante (TDI) Acute and Prolonged

Toxicity to Fish: LC50: > 133 mg/l (Rainbow Trout), 96 h)
Acute Toxicity to Aquatic Invertebrates: EC50 > 12.5 mg/l (Water flea (Daphnia magna), 48 h)
Persistence and degradability: Product is not biodegradable.

13. DISPOSAL INFORMATION

Waste treatment methods: Follow all applicable local, state, and federal disposal regulations.
Spillage in sewers or watercourses is not allowed.
The residues, including the empty containers, must be eliminated in a controlled manner. The empty containers must be recycled, recovered or eliminated by authorised and/or qualified administrators. In any case, the treatment adopted must be carried out in a licensed facility. Do not attempt to refill or clean containers since residue is difficult to remove. Do not burn or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT / IMDG / IATA / ICAO: Not classified as a dangerous good under transport regulations.

15. REGULATORY INFORMATION

Component (CAS#) [%] – CODES

RQ (100LBS), Toluene Diisocyanate (26471-62-5) [<0.06 %] CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Regulatory Code Descriptions

RQ:	Reportable Quantity
CERCLA:	Superfund clean-up substance
HAP:	Hazardous Air Pollutants
MASS:	MA Massachusetts Hazardous Substances List
NJHS:	NJ Right-to-know Hazardous Substances
OSHAWAC:	OSHA Workplace Air Contaminants
PA:	PA Right-To-Know List of Hazardous Substances
SARA313:	SARA 313 Title III Toxic Chemicals
TSCA:	Toxic Substances Control Act
TXAIR:	TX Air Contaminants with Health Effects Screening Level

16. OTHER INFORMATION

HMIS III:	Health = 1, Fire = 1, Physical Hazard = 1
HMIS PPE:	C – Safety Glasses, Gloves, Apron

Manufacturer Disclaimer: This SDS complies with 29 CFR 1910.1200 (The Hazard Communication Standard, USA) and GHS. Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Thermoset Solutions, LLC makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that persons receiving same will make their own determination as to its suitability for their purpose prior to use. In no event will Thermoset Solutions, LLC be responsible for damages of any nature whatsoever resulting from the use of, misuse or reliance upon information. No representations or warranties either express or implied, or merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers. Regulatory requirements are subject to change and may differ from on location to another. It is the buyer's responsibility to ensure its activities comply with federal, state or provincial and local laws and regulations.