

Safety Data Sheet (SDS)

Section 1 – Identification

1(a) **Product Identifier Used on Label:** RVP 99-200

1(b) **Other Means of Identification:** None

1(c) **Recommended Use of the Chemical and Restrictions on Use:** B component of a two-part polyurethane spray foam & No Restrictions

1(d) **Name, Address, and Telephone Number:**

R-Value Polyurethanes LLC
2800 E. Vernon Rd
Rosebush, MI 48878

Phone number: 989 433 5557

1(e) **Emergency Phone Number:** CHEMTREC (Day or Night) +1 800 924-9300

Section 2 – Hazard(s) Identification

2(a) **Classification of the Chemical:** RVP 99-200 is considered a hazardous material according to the criteria specified in REACH [REGULATION (EC) No 1907/2006] and CLP [REGULATION (EC) No 1272/2008] and OSHA 29 CFR 1910.1200 Hazard Communication Standard. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 8 and 11 for additional information.

2(b) **Signal Word, Hazard Statement(s), Symbols and Precautionary Statement(s):**

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)
	Eye Irritation – 1 Skin Irritation – 1	DANGER	Causes severe skin burns and eye damage

Precautionary Statement(s):

Prevention	Response	Storage/Disposal
Do not breathe dusts or mists. Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling.	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor 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/doctor.	Dispose of contents in accordance with federal, state and local regulations. Store locked up.

2(c) **Hazards not Otherwise Classified:** None Known

2(d) **Unknown Acute Toxicity Statement (Mixture):** None Known

Section 3 – Composition/Information on Ingredients

3(a-c) **Chemical Name, Common Name (Synonyms), CAS Number and Other Identifiers, and Concentration:**

Chemical Name	CAS Number	EC Number	% weight
Polyol Blend	Varies	Varies	50 - 80
Polyether modified siloxane	NA	NA	3 - 10
bis(2-dimethylaminoethyl)(methyl)amine	3030-47-5	221-201-1	1 - 5
1,4-Diazabicyclo(2.2.2.)Octane	280-57-9	205-999-9	1 - 5

EC- European Community

CAS- Chemical Abstract Service

Section 4 – First-aid Measures

4(a) **Description of Necessary Measures:**

- **Inhalation:** If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
- **Eye Contact:** 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.
- **Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- **Ingestion:** If swallowed: Rinse mouth. Do NOT induce vomiting.

Section 4 – First-aid Measures (continued)

4(b) Most Important Symptoms/Effects, Acute and Delayed (Chronic):

Acute effects:

- **Inhalation:** Excessive exposure to high concentrations may cause irritation to the mucous membranes of the upper respiratory tract.
- **Eye:** May cause long term damage to the eyes.
- **Skin:** May cause irritation or sensitization, possibly leading to dermatitis.
- **Ingestion:** Ingestion may cause nausea and/or vomiting.

Chronic Effects:

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any airborne exposure. Persons with pre-existing skin disorders may be more susceptible to dermatitis.

4(c) Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5 – Fire-fighting Measures

5(a) Suitable (and unsuitable) Extinguishing Media: Use extinguishers appropriate for surrounding materials.

5(b) Specific Hazards arising from the chemical: When burned, toxic smoke, fume and vapor may be emitted.

5(c) Special protective equipment and precautions for fire-fighters: Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: Clean-up personnel should be protected against contact with eyes and skin.

6(b) Methods and materials for containment and clean up: Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements. For releases of hazardous substances, the federal government has established Superfund Reportable Quantities (RQs). If a hazardous substance is released to the environment in an amount that equals or exceeds its RQ, the release must be reported to federal authorities, unless certain reporting exemptions for hazardous substance releases also apply.

Section 7 - Handling and Storage

7(a) Precautions for safe handling: Do not breathe dusts, mists or sprays. Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. Practice good housekeeping.

7(b) Conditions for Safe Storage, including any Incompatibilities: Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use. Incompatible products: Strong bases. Strong acids. Incompatible materials: Sources of ignition.

Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): The following exposure limits are offered as reference, for an experienced industrial hygienist to review.

Ingredients	OSHA PEL ¹	ACGIH TLV ²	NIOSH REL ³	IDLH ⁴
Polyol Blend	NE	NE	NE	NE
Polyether modified siloxane	NE	NE	NE	NE
bis(2-dimethylaminoethyl) (methyl)amine	NE	NE	NE	NE
1,4-Diazabicyclo (2.2.2.) Octane	NE	NE	NE	NE

NE - None Established

1. OSHA PELs (Permissible Exposure Limits) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A (“C”) designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday. An Action level (AL) is used by OSHA and NIOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity, which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring. Action Levels are generally set at one half of the PEL but the actual level may vary from standard to standard. The intent is to identify a level at which the vast majority of randomly sampled exposures will be below the PEL.
2. Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes. DSEN – May cause dermal sensitization. This notation is used to indicate the potential for dermal sensitization resulting from the interaction of an absorbed agent and ultraviolet light (i.e. photosensitization). RSEN – May cause respiratory sensitization.
3. The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL)- Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
4. The "immediately dangerous to life or health air concentration values (IDLHs)" are used by NIOSH as part of the respirator selection criteria and were first developed in the mid-1970's by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994. Ca is designated as carcinogen.

8(b) Appropriate Engineering Controls: No information available

Section 8 - Exposure Controls / Personal Protection (continued)

8(c) Individual Protection Measures:

- **Respiratory Protection:** Wear appropriate respiratory protection if needed.
- **Eyes:** Chemical goggles or safety glasses.
- **Skin:** Wear protective gloves.
- **Other protective equipment:** Avoid all unnecessary exposure.

Section 9 - Physical and Chemical Properties

9(a) Appearance (physical state, color, etc.): Liquid

9(b) Odor: odorless

9(c) Odor Threshold: NA

9(d) pH: ND

9(e) Melting Point/Freezing Point: <32 F

9(f) Initial Boiling Point and Boiling Range: ND

9(g) Flash Point: >200 F

9(h) Evaporation Rate: ND

9(i) Flammability (solid, gas): ND

NA - Not Applicable

ND - Not Determined for product as a whole

9(j) Upper/Lower Flammability or Explosive Limits: ND

9(k) Vapor Pressure: NA

9(l) Vapor Density (Air = 1): ND

9(m) Relative Density: 1.02 sp gr

9(n) Solubility(ies): ND

9(o) Partition Coefficient n-octanol/water: ND

9(p) Auto-ignition Temperature: >500 F

9(q) Decomposition Temperature: >500 F

9(r) Viscosity: ND

Section 10 - Stability and Reactivity

10(a) Reactivity: Stable

10(b) Chemical Stability: RVP W-200 is stable under normal storage and handling conditions.

10(c) Possibility of Hazardous Reaction: No hazardous reactions expected.

10(d) Conditions to Avoid: Elevated Temperatures

10(e) Incompatible Materials: Oxidizing materials, strong alkalis and acids, isocyanates

10(f) Hazardous Decomposition Products: None Expected

Section 11 - Toxicological Information

11(a-j) Information on Toxicological Effects: The following toxicity data has been determined for **RVP 99-200** by using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Skin Irritation (covers Categories 1A, 1B, 1C, and 2)	2	2 ^b		Danger	Causes skin irritation.
Eye Damage/ Irritation (covers Categories 1, 2A and 2B)	1	1 ^c		Danger	Causes serious eye damage.

NR Not Rated - Available data does not meet criteria for classification.

The Toxicological data listed below are presented regardless to classification criteria. Individual hazard classification categories where the toxicological information has met or exceeded a classification criteria threshold are listed above.

a. No LC₅₀ or LD₅₀ has been established for **RVP 99-200**. The following data has been determined for the components:

- **bis(2-dimethylaminoethyl)(methyl)amine:** Rat LD₅₀ = 1,330 mg/kg (oral)
Rabbit LD₅₀ >200-1000 mg/kg (Dermal)
- **Polyol:** Rat LD₅₀ = >2,000 mg/kg (oral)
Rabbit LD₅₀ >2000 mg/kg (Dermal)

b. No Skin (Dermal) Irritation data available for **RVP 99-200** as a mixture. The following Skin (Dermal) Irritation data has been determined for the components:

- **bis(2-dimethylaminoethyl)(methyl)amine:** Severe Skin irritant.
- **1,4-Diazabicyclo(2.2.2.)Octane:** Causes skin irritation.

c. No Eye Irritation data available for **RVP 99-200** as a mixture. The following Eye Irritation information was found for the components:

- **bis(2-dimethylaminoethyl)(methyl)amine:** Causes severe eye irritation
- **1,4-Diazabicyclo(2.2.2.)Octane:** Causes severe eye irritation.

d. No Skin (Dermal)/Respiratory Sensitization data available for **RVP 99-200** as a mixture or its individual components.

Section 11 – Toxicological Information (continued)

11 (a-j) Information on Toxicological Effects:

- d. No Aspiration Hazard data available for **RVP 99-200** as a mixture or its individual components.
- f. No Germ Cell Mutagenicity data available for **RVP 99-200** as a mixture or its individual components.
- g. Carcinogenicity: IARC, NTP, and OSHA do not list **RVP 99-200** as a carcinogen or its individual components.
- h. No Toxic Reproduction data available for **RVP 99-200** as a mixture or its individual components.
- i. No Specific Target Organ Toxicity (STOT) following a Single Exposure data available for **RVP 99-200** as a mixture or its individual components.
- j. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data was available for **RVP 99-200** as a mixture or its individual components.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2020, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS), European Union Classification, Labeling and Packaging, (EU CPL), Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), International Uniform Chemical Information Database (IUCLID), TOXicology Data NETwork (TOXNET), European Risk Assessment Reports (EU RAR).

The following health hazard information is provided regardless to classification criteria and is based on the individual component(s):

Acute Effects by Component:

- **POLYETHER POLYOL BLEND:** Not Reported/ Not Classified
- **POLYETHER MODIFIED SILOXANE:** Not Reported/ Not Classified
- **BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE:** Causes severe eye and skin damage/irritation
- **1,4-DIAZABICYCLO(2.2.2.)OCTANE:** Causes severe eye damage and skin irritation

Delayed (chronic) Effects by Component:

- **POLYETHER POLYOL BLEND:** Not Reported/ Not Classified
- **POLYETHER MODIFIED SILOXANE:** Not Reported/ Not Classified
- **BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE:** Not Reported/ Not Classified
- **1,4-DIAZABICYCLO(2.2.2.)OCTANE:** Not Reported/ Not Classified

Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Available

12(b) Persistence & Degradability: No Data Available

12(c) Bioaccumulative Potential: No Data Available

12(d) Mobility (in soil): No Data Available

Additional Information:

Hazard Category: No Data Available

Signal Word: No Data Available

Hazard Symbol: No Data Available

Hazard Statement: No Data Available

Section 13 - Disposal Considerations

Disposal: Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

Container Cleaning and Disposal: Follow Local, State, Federal and international regulations. Observe safe handling precautions.

Please note this information is for RVP W-200 in its original form. Any alterations can void this information.

Section 14 - Transport Information

14 (a-g) Transportation Information: NO RESTRICTION

US Department of Transportation (DOT) under 49 CFR 172.101 does not regulate **RVP 99-200** as a hazardous material due to quantity shipped. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

<p>Shipping Name: Not Regulated</p> <p>Shipping Symbols: Not Applicable (NA)</p> <p>Hazard Class: NA</p> <p>UN No.: Not Regulated</p> <p>Packing Group: NA</p> <p>DOT/IMO Label: NA</p>	<p>Packaging Authorizations</p> <p>a) Exceptions: NA</p> <p>b) Non-bulk: NA</p> <p>c) Bulk: NA</p>	<p>Quantity Limitations</p> <p>a) Passenger Aircraft or Rail: NA</p> <p>b) Cargo Aircraft Only: NA</p> <p>Vessel Stowage Location: NA</p> <p>DOT reportable quantities: N/A</p>
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Special Provisions (172.102): Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product knows what to do in the event of an accident or spillage.

Section 14 - Transport Information (continued)

International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

Regulations Concerning the International Carriage of Dangerous Goods by Road (ADR) does not regulate RVP 99-200 as a hazardous material.

Shipping Name: Not Regulated Classification Code: NA UN No.: NA Packing Group: NA ADR Label: NA Special Provisions: NA Limited Quantities: NA	Packaging a) Packing Instructions: NA b) Special Packing Provisions: NA c) Mixed Packing Provisions: NA	Portable Tanks & Bulk Containers a) Instructions: NA b) Special Provisions: NA
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International Air Transport Association (IATA) does not regulate RVP 99-200 as a hazardous material.

Shipping Name: Not Regulated Class/Division: NA Hazard Label (s): NA UN No.: NA Packing Group: NA Excepted Quantities (EQ): NA	Passenger & Cargo Aircraft		Cargo Aircraft Only: Pkg Inst: NA Max Net Qty/Pkg: NA	Special Provisions: NA ERG Code: NA
	Limited Quantity (EQ)			
	Pkg Inst: NA Max Net Qty/Pkg: NA	Pkg Inst: NA Max Net Qty/Pkg: NA		

Pkg Inst – Packing Instructions Max Net Qty/Pkg – Maximum Net Quantity per Package ERG – Emergency Response Drill Code

RVP W-200 does not have a Transport Dangerous Goods (TDG) classification.

Section 15 - Regulatory Information

Regulatory Information: *The following listing of regulations relating to an R-Value Polyurethanes, LLC product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, **RVP 99-200** as a whole is listed. Refer to Section 8, Exposure Controls and Personal Protection.

EPA Regulations:

SARA Potential Hazard Categories: Immediate Acute Health Hazard

Section 313 Supplier Notification: The product, **RVP 99-200** does not contain chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372:

THIS PRODUCT DOES NOT CONTAIN NOR IS IT MANUFACTURED WITH OZONE DEPLETING SUBSTANCES

State Regulations: The product, **RVP 99-200** as a whole or components are not listed in any state regulations

Pennsylvania Right to Know (RTK):	Contains regulated material in the following categories: <ul style="list-style-type: none"> • Hazardous Substances: None • Environmental Hazards: None
California Prop. 65:	NA The product, RVP 99-200 does not contain chemicals which is known to the State of California to cause cancer or reproductive toxicity. For more information go to www.P65Warnings.ca.gov .
New Jersey:	Contains regulated material in the following categories: <ul style="list-style-type: none"> • Hazardous Substance: None • Special Health Hazard Substances: None • Environmental Hazards: None
Minnesota:	None
Massachusetts:	None

Other Regulations:

WHMIS Classification (Canadian): The product, **RVP 99-200** is not listed as a whole or it's individual components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Prepared By: AM Health and Safety, Inc for R-Value Polyurethanes, LLC

Revision History:
1/18/2020 – Original

Revised Date: Not Applicable (NA)

Section 16 - Other Information (continued)

Additional Information:

Hazardous Material Identification System (HMIS) Classification

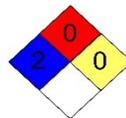
Health Hazard	2
Fire Hazard	0
Physical Hazard	0

HEALTH= 2 * Temporary or minor injury may occur.

FIRE= 0, Materials that will not burn.

PHYSICAL HAZARDS = 0, Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

National Fire Protection Association (NFPA)



HEALTH = 2, Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

FIRE = 0, Materials that will not burn.

INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.

ABBREVIATIONS/ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	NIF	No Information Found
BEIs	Biological Exposure Indices	NIOSH	National Institute for Occupational Safety and Health
CAS	Chemical Abstracts Service	NTP	National Toxicology Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ORC	Organization Resources Counselors
CLP	Classification, Labelling and Packaging	OSHA	Occupational Safety and Health Administration
CFR	Code of Federal Regulations	PEL	Permissible Exposure Limit
CNS	Central Nervous System	PNOR	Particulate Not Otherwise Regulated
GI, GIT	Gastro-Intestinal, Gastro-Intestinal Tract	PNOC	Particulate Not Otherwise Classified
HMIS	Hazardous Materials Identification System	PPE	Personal Protective Equipment
IARC	International Agency for Research on Cancer	ppm	parts per million
LC50	Median Lethal Concentration	RCRA	Resource Conservation and Recovery Act
LD50	Median Lethal Dose	REACH	Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals
LD_{Lo}	Lowest Dose to have killed animals or humans	RTECS	Registry of Toxic Effects of Chemical Substances
LEL	Lower Explosive Limit	SARA	Superfund Amendment and Reauthorization Act
LOEL	Lowest Observed Effect Level	SCBA	Self-contained Breathing Apparatus
LOAEC	Lowest Observable Adverse Effect Concentration	SDS	Safety Data Sheet
µg/m³	microgram per cubic meter of air	STEL	Short-term Exposure Limit
mg/m³	milligram per cubic meter of air	TLV	Threshold Limit Value
mppcf	million particles per cubic foot	TWA	Time-weighted Average
MSHA	Mine Safety and Health Administration	UEL	Upper Explosive Limit
NFPA	National Fire Protection Association		

Disclaimer: This information is taken from sources or based upon data believed to be reliable. Our objective in sending this information is to help you protect the health and safety of your personnel and to comply with the OSHA Hazard Communication Standard and Title III of the Emergency Planning and Community Right-to-Know Act. R-Value Polyurethanes, LLC makes no warranty as to the absolute correctness, completeness, or sufficiency of any of the foregoing, or any additional, or other measures that may not be required under particular conditions. THIS R-Value Polyurethanes, LLC SDS MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM COURSE OF DEALING OR TRADE.