1. Product and Company Identification

Product Name: Quick Mender (B-Side)

VersaFlex / Raven Lining Systems
686 South Adams Street
Kansas City, KS 66105
www.versaflex.com / www.ravenlining.com

Company Phone: (913) 321-9000
Company Toll Free: (800) 324-2810
CHEMTREC 24 hour Emergency USA: (800) 424-9300
CHEMTREC 24 hour International: (703) 527-3887

Product Use: Primer / Sealer / Coating / Lining
Not recommended for: Non Professional Use

2. Hazards Identification

Signal Word: Danger

GHS Ratings:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquid</td>
<td>3</td>
</tr>
<tr>
<td>Skin corrosive</td>
<td>2</td>
</tr>
<tr>
<td>Eye corrosive</td>
<td>2A</td>
</tr>
<tr>
<td>Mutagen</td>
<td>1B</td>
</tr>
<tr>
<td>Carcinogen</td>
<td>1B</td>
</tr>
<tr>
<td>Reproductive toxin</td>
<td>1B</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>1</td>
</tr>
</tbody>
</table>

- Flammable liquid 3: Flash point >= 23°C and <= 60°C (140°F).
- Skin corrosive 2: Reversible adverse effects in dermal tissue, Draize score: >= 2.3 < 4.0 or persistent inflammation.
- Eye corrosive 2A: Eye irritant: Subcategory 2A, Reversible in 21 days.
- Mutagen 1B: Known to produce heritable mutations in human germ cells Subcategory 1B, Positive results: In vivo heritable germ cell tests in mammals, Human germ cell tests, In vivo somatic mutagenicity tests, combined with some evidence of germ cell mutagenicity.
- Carcinogen 1B: Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity.
- Reproductive toxin 1B: Presumed, Based on experimental animals.
- Aspiration hazard 1: Aspiration Toxicity Category 1: Known (regarded)- human evidence - hydrocarbons with kinematic viscosity ? 20.5 mm2/s at 40°C.

GHS Hazards

- H226: Flammable liquid and vapour.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H340: May cause genetic defects.
- H350: May cause cancer.
- H360: May damage fertility or the unborn child.

GHS Precautions
### 3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS number</th>
<th>Weight Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amine-based Polyol</td>
<td>40 - 50%</td>
<td></td>
</tr>
<tr>
<td>Solvent naphtha, petroleum, light aromatic</td>
<td>64742-95-6</td>
<td>20 - 30%</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
<td>10 - 20%</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>5 - 10%</td>
<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>N-Butyl-2-(1-ethylpentyl)-1,3-oxazolidine</td>
<td>165101-57-5</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

### 4. First Aid Measures

Inhalation: Remove to fresh air if effects occur. Consult a physician.

Eye Contact: Flush with large quantities of water for at least 15 minutes. Consult a physician.

Skin Contact: Wash thoroughly with soap and flowing water.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. Fire Fighting Measures

Flash Point: 44 C (111 F)

Flammable Properties: Product is a combustible liquid, and will burn if ignited. NFPA Flammability Class II.
The definition and classification of flammable and combustible liquids are addressed in NFPA 30. A flammable liquid is defined as a liquid whose flash point is < 100 deg F (38 deg C), while a combustible liquid is one whose flash point is > 100 deg F. These groups are further classified into the following NFPA Flammability Classes:

- **Class I liquids** are flammable liquids that have a flash point < 73 deg F (23 deg C) and boiling point < 100 deg F.
- **Class IC liquids** are flammable liquids that have a flash point > 73 deg F, but < 100 deg F.
- **Class II liquids** are combustible liquids that have a flash point > 100 deg F, but < 140 deg F (60 deg C).
- **Class IIIA liquids** are combustible liquids that have a flash point > 140 deg F, but < 200 deg F (93 deg C).
- **Class IIIB liquids** are combustible liquids that have a flash point > 200 deg F.

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, water fog or fine spray. Alcohol resistant foams are preferred, general purpose synthetic foams or protein foams may function, but will not be as effective.

**Unsuitable Extinguishing Media:** Do not use direct water stream, as it may spread fire.

**Products of Combustion:** Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides and other unidentified toxic and/or irritating compounds.

**Fire Fighting:** Stay upwind and keep people away. Isolate fire and deny unnecessary entry. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible, as it may cause environmental damage. Review section 6 and section 12 of this SDS.

**Protection of Firefighters:** Wear positive pressure self-contained breathing apparatus (SCBA) and approved protective clothing (helmet, coat, trousers, boots and gloves). If contact is likely, use full chemical resistant fire fighting clothing with SCBA.

### 6. Accidental Release Measures

**Personal Precautions:** Put on appropriate personal protective equipment (see section 8).

**Environmental Precautions:** Prevent spilled material from contact with soil, drains and sewers.

**Methods for Containment:** Contain by diking with sand, earth or other suitable material.

**Methods for Clean-up:** Absorb spill with an inert material, use non-sparking tools to place into labeled waste container for disposal.

### 7. Handling and Storage

**Handling:** Wear appropriate personal protective equipment (see section 8). Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Do not ingest. Avoid prolonged or repeated contact with skin. May cause allergic skin reaction, persons with a history of skin sensitization should not be employed in any process in which this product is used. Wash thoroughly with soap and water after handling. Do not handle or store near flame, heat or strong oxidants. Keep away from sources of ignition and hot metal surfaces.

**Storage:** Store original unopened containers in a sheltered area between 60°F and 80°F (15°C and 27°C) at atmospheric pressure. Do not store in direct sunlight. Keep containers closed when not in use.

### 8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name / CAS No.</th>
<th>OSHA Exposure Limits</th>
<th>ACGIH Exposure Limits</th>
<th>Other Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amine-based Polyol</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Solvent naphtha, petroleum, light aromatic 64742-95-6</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene 95-63-6</td>
<td>Not Established</td>
<td>Not Established</td>
<td>NIOSH: 25 ppm TWA; 125 mg/m3 TWA</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Xylene 1330-20-7</td>
<td>100 ppm TWA; 435 mg/m3 TWA</td>
<td>150 ppm STEL 100 ppm TWA</td>
<td>Not Established</td>
</tr>
</tbody>
</table>
Engineering Controls: General mechanical ventilation is sufficient for most conditions. Control airborne levels below the exposure guidelines, if established.

Local exhaust ventilation may be necessary for some operations.

General Hygiene Considerations: Wash thoroughly after handling and before eating, drinking or smoking.

Eye/face Protection: Use chemical safety glasses, splash-proof eye goggles or goggles with full face shield.

Skin Protection: Use nitrile or other impermeable chemical resistant gloves to prevent skin irritation. If potential for skin contact is present, wear impervious, long-sleeved, body covering clothing and rubber boots.

Respiratory Protection: Respiratory protection should not be needed. If exposure may or does exceed occupational exposure limits, respiratory irritation is experienced, or during spray application, use a properly fitted MSHA/NIOSH approved respirator fitted with organic vapor cartridges. In addition, spray application may require the use of paint pre-filters. If the respirator is the sole means of protection, use a full-face supplied air respirator. If sanding or grinding on cured material, use above respirator fitted with HEPA filters or a dust mask.

Contaminated Gear: Remove contaminated clothing and shoes while washing. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear to dark yellow</td>
</tr>
<tr>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Odor Ammonia-like</td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
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</tr>
<tr>
<td>Boiling Point</td>
<td>138°C</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>No data found</td>
</tr>
<tr>
<td>Flash Point</td>
<td>111°F, 44°C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data found</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data found</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data found</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.9 - 1.0</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data found</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>No data found</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data found</td>
</tr>
<tr>
<td>Lbs VOC/Gallon Less Water</td>
<td>3.2</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data found</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions (see Section 7).

Conditions to Avoid: Elevated temperatures may cause product to decompose.

Incompatible Materials: Strong acids, bases, or oxidizing agents. Avoid unintended contact with isocyanates and/or epoxies.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides and other unidentified toxic and/or irritating compounds.

Hazardous polymerization will not occur.

11. Toxicological Information

Mixture Toxicity
- Inhalation Toxicity LC50: 133mg/L

Component Toxicity
- 1330-20-7 Xylene
  - Oral LD50: 3,500 mg/kg (Rat)
  - Dermal LD50: 4,350 mg/kg (Rabbit)
  - Inhalation LC50: 29 mg/L (Rat)

Likely Routes of Exposure:
- No data found

Target Organs
May cause damage to the following organs:

- Blood
- Eyes
- Central Nervous System
- Skin
- Respiratory System

### Effects of Overexposure

#### CAS Number

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-95-6</td>
<td>Solvent naphtha, petroleum, light aromatic</td>
<td>20 - 30%</td>
<td>Solvent naphtha, petroleum, light aromatic: EU REACH: Present (P)</td>
</tr>
</tbody>
</table>

### 12. Ecological Information

#### Component Ecotoxicity

- **Solvent naphtha, petroleum, light aromatic**
  - 96 Hr LC50 *Oncorhynchus mykiss*: 9.22 mg/L
  - 48 Hr EC50 *Daphnia magna*: 6.14 mg/L
- **1,2,4-Trimethylbenzene**
  - 96 Hr LC50 *Pimephales promelas*: 7.19 - 8.28 mg/L [flow-through]
  - 48 Hr EC50 *Daphnia magna*: 6.14 mg/L
- **Xylene**
  - 96 Hr LC50 *Pimephales promelas*: 13.4 mg/L [flow-through]; 96 Hr LC50 *Oncorhynchus mykiss*: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 *Lepomis macrochirus*: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 *Lepomis macrochirus*: 19 mg/L; 96 Hr LC50 *Lepomis macrochirus*: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 *Pimephales promelas*: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 *Cyprinus carpio*: 780 mg/L [semi-static]; 96 Hr LC50 *Cyprinus carpio*: >780 mg/L; 96 Hr LC50 *Poecilia reticulata*: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 *Gammarus lacustris*: 0.6 mg/L

### 13. Disposal Considerations

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations. The preferred method for disposal of uncontaminated product is by recycling, reclaiming, incineration or other thermal destruction device using a licensed and permitted waste disposal contractor.

### 14. Transport Information

<table>
<thead>
<tr>
<th>Agency</th>
<th>Proper Shipping Name</th>
<th>UN Number</th>
<th>Packing Group</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Combustible liquids, n.o.s. (solvent naphtha, petroleum, light aromatic)</td>
<td>NA1993</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Reclassified in accordance with 49 CFR 173.150(f) since the flash point is above 38C (100F)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO/IATA</td>
<td>Flammable liquids, n.o.s. (solvent naphtha, petroleum, light aromatic)</td>
<td>UN1993</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>IMDG</td>
<td>Flammable liquids, n.o.s. (solvent naphtha, petroleum, light aromatic)</td>
<td>UN1993</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>TDG</td>
<td>Flammable liquids, n.o.s. (solvent naphtha, petroleum, light aromatic)</td>
<td>UN1993</td>
<td>III</td>
<td>3</td>
</tr>
</tbody>
</table>

### 15. Regulatory Information

USA Federal: This SDS has been prepared in compliance with the Occupational Safety and Health Act (OSHA) Hazard Communication Standard (29 CFR 1910.1200). This product is considered to be a hazardous chemical under that standard. The specific chemical identity and/or exact percentage of any proprietary ingredient(s) may be withheld as a trade secret, pursuant to the standard.
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): To the best of our knowledge, this product contains the following chemicals which are known to the State of California to cause cancer, developmental or reproductive toxicity at levels which require warning under this statute:

- None

USA Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - section 103 Hazardous Substances Reportable Quantities (RQs): To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 302.4:

1330-20-7  Xylene 1 to 5 %

Massachusetts Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1330-20-7  Xylene 1 to 5 %
95-63-6  1,2,4-Trimethylbenzene 10 to 20 %

New Jersey Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1330-20-7  Xylene 1 to 5 %
95-63-6  1,2,4-Trimethylbenzene 10 to 20 %

Pennsylvania Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1330-20-7  Xylene 1 to 5 %
95-63-6  1,2,4-Trimethylbenzene 10 to 20 %

USA Resource Conservation and Recovery Act (40 CFR 261): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1330-20-7  Xylene 1 to 5 %

USA Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 313 Toxic Release Inventory (TRI) Form R: To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 372.65:

- None

USA Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 302 Extremely Hazardous Substances Threshold Planning Quantities (TPQs): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- None

USA Toxic Substances Control Act (TSCA) - section 12(b): To the best of our knowledge, this product contains the following chemicals above the de minimus concentration(s) which requires notification to the Environmental Protection Agency (EPA) per 40 CFR 707, subpart D, if any person intends to export:

- None

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulation</th>
<th>All Components Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Canada Domestic Substance List</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Canada Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>China Inventory of Existing Chemical Substances</td>
<td>Yes</td>
</tr>
<tr>
<td>EU</td>
<td>EU REACH List of Registered Intermediates</td>
<td>No</td>
</tr>
<tr>
<td>EU</td>
<td>EU REACH List of Pre-Registered Substances</td>
<td>Yes</td>
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<tr>
<td>EU</td>
<td>EU REACH List of Registered Substances</td>
<td>No</td>
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<tr>
<td>Japan</td>
<td>Japanese Existing and New Chemical Substances List</td>
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</tr>
<tr>
<td>South Korea</td>
<td>South Korea Existing Chemicals Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippines Inventory of Chemicals and Chemical</td>
<td>No</td>
</tr>
<tr>
<td>USA</td>
<td>USA TSCA Inventory list section 8(b)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### 16. Other Information

**Legend**

- **ACGIH**: American Conference of Governmental Industrial Hygienists, Inc.
- **ADR/RID**: European Agreement for transport of dangerous goods by road (ADR) and by rail (RID)
- **CAS No.**: Chemical Abstract Service Registry Number
- **CERCLA**: Comprehensive Environmental Response, Compensation, and Liability Act, AKA "Superfund"
- **DOT**: Department of Transportation (USA)
- **IARC**: International Agency for Research on Cancer
- **IATA**: International Air Transport Association
- **ICAO**: International Civil Aviation Organization
- **IMO**: International Maritime Organization
- **IMDG**: International Maritime Dangerous Goods
- **MSHA**: Mine Safety and Health Administration
- **N.A.**: Not Applicable
- **N.D.**: Not Determined
- **N.E.**: Not Established
- **NFPA**: National Fire Protection Association
- **NIOSH**: National Institute for Occupational Safety and Health
- **NTP**: National Toxicology Program
- **OSHA**: Occupational Safety and Health Administration (USA)
- **PEL**: Permissible Exposure Limit
- **SARA**: Superfund Amendments and Reauthorization Act of 1986 (40 CFR)
- **STEL**: Short Term Exposure Limit (15 minute Time Weighted Average)
- **TDG**: Canada Transport of Dangerous Goods regulations
- **TLV**: Threshold Limit Value
- **TWA**: Time Weighted Average
- **WHMIS**: Canada Workplace Hazardous Materials Information System

#### Hazardous Material Information System (HMIS) & NFPA Hazard Rating Legend

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

- **HMIS & NFPA Hazard Rating Legend**
  - * = Chronic Health Hazard
  - 0 = INSIGNIFICANT
  - 1 = SLIGHT
  - 2 = MODERATE
  - 3 = HIGH

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**Date Prepared**: 5/1/2019

**SDS for**: Quick Mender (B-Side)