



A Proven Fit
Two Brands, One Mission

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:

Flammable liquid	3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ (140°F).
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ 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 $\geq 20.5 \text{ mm}^2/\text{s}$ 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

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P233	Keep container tightly closed
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/light/.../equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P321	Specific treatment (see Section 4 of the SDS).
P331	Do NOT induce vomiting.
P362	Take off contaminated clothing and wash before reuse.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352	IF ON SKIN: Wash with soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use water for or fine spray for extinction.
P405	Store locked up.
P403+P235	Store in a well ventilated place. Keep cool.
P501	Dispose of contents/container according to Section 13 of the SDS.

3. Composition / Information on Ingredients

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

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 IA liquids are flammable liquids that have a flash point < 73 deg F (23 deg C) and boiling point < 100 deg F.

Class IB liquids are flammable liquids that have a flash point < 73 deg F and a 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

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Amine-based Polyol	Not Established	Not Established	Not Established
Solvent naphtha, petroleum, light aromatic 64742-95-6	Not Established	Not Established	Not Established
1,2,4-Trimethylbenzene 95-63-6	Not Established	Not Established	NIOSH: 25 ppm TWA; 125 mg/m ³ TWA
Trade Secret	Not Established	Not Established	Not Established
Xylene 1330-20-7	100 ppm TWA; 435 mg/m ³ TWA	150 ppm STEL 100 ppm TWA	Not Established

N-Butyl-2-(1-ethylpentyl)-1,3-oxazolidine 165101-57-5	Not Established	Not Established	Not Established
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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 faceshield.

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

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

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

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 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 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

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

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

<u>Country</u>	<u>Regulation</u>	<u>All Components Listed</u>
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Canada Domestic Substance List	Yes
Canada	Canada Non-Domestic Substances List (NDSL)	No
China	China Inventory of Existing Chemical Substances	Yes
EU	EU REACH List of Registered Intermediates	No
EU	EU REACH List of Pre-Registered Substances	Yes
EU	EU REACH List of Registered Substances	No
Japan	Japanese Existing and New Chemical Substances List	No
South Korea	South Korea Existing Chemicals Inventory	No
Philippines	Philippines Inventory of Chemicals and Chemical	No
USA	USA TSCA Inventory list section 8(b)	Yes

- None

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)
HCS	OSHA Hazard Communication Standard (29 CFR 1910.1200)
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)

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

HMIS & NFPA Hazard Rating Legend

* = Chronic Health Hazard

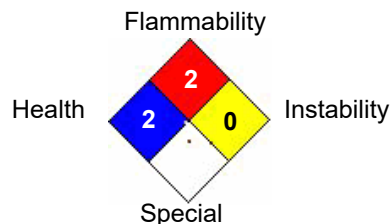
0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

National Fire Protection Association (NFPA)



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Reviewer Revision

