1. Product and Company Identification

Product Name: Aliphatic ClearCoat (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></th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitizer</td>
<td>1</td>
<td>Known to produce heritable mutations in human germ cells</td>
</tr>
<tr>
<td>Mutagen</td>
<td>1B</td>
<td>Subcategory 1B, Positive results: In vivo heritable germ cell tests in mammals, Human germline tests, In vivo somatic mutagenic tests, combined with some evidence of germ cell mutagenicity.</td>
</tr>
<tr>
<td>Carcinogen</td>
<td>1B</td>
<td>Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity.</td>
</tr>
<tr>
<td>Reproductive toxin</td>
<td>1B</td>
<td>Presumed, Based on experimental animals.</td>
</tr>
</tbody>
</table>

GHS Hazards

- H317: May cause an allergic skin reaction.
- 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.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- 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).
- P363: Wash contaminated clothing before reuse.
- P302+P352: IF ON SKIN: Wash with soap and water.
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>Aspartic Acid Ester</td>
<td>136210-30-5</td>
<td>30 - 60%</td>
</tr>
<tr>
<td>Aspartic Ester</td>
<td>136210-32-7</td>
<td>15 - 40%</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0 - 10%</td>
</tr>
<tr>
<td>Polyether Polyol</td>
<td>N/A</td>
<td>0 - 5%</td>
</tr>
<tr>
<td>Fumaric Acid Diester</td>
<td>623-91-6</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>N/A</td>
<td>1 - 2%</td>
</tr>
<tr>
<td>Solvent naphtha, petroleum, light aromatic</td>
<td>64742-95-6</td>
<td>1 - 2%</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>0 - 1%</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: >100 C (>212 F)
Flammable Properties: Product is not considered a fire hazard, but will burn if ignited.
NFPA Flammability Class: Class III A liquids are combustible liquids that have a flash point > 140 deg F (60 deg C), but < 200 deg F (93 deg C). Class III B 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>Aspartic Acid Ester 136210-30-5</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Aspartic Ester 136210-32-7</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Titanium Dioxide 13463-67-7</td>
<td>15 mg/m3 TWA (total dust)</td>
<td>10 mg/m3 TWA</td>
<td>Not Established</td>
</tr>
<tr>
<td>Polyether Polyol N/A</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Fumaric Acid Diester 623-91-6</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Trade Secret N/A</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>Carbon Black 1333-86-4</td>
<td>3.5 mg/m3 TWA</td>
<td>3 mg/m3 TWA (inhalable fraction)</td>
<td>NIOSH: 3.5 mg/m3 TWA; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)</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 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

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Product color varies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Ammonia-like</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**

**Component Toxicity**

Toxicological information on this product or its components appear in this section when such data is available.

**Likely Routes of Exposure:**

No data found

**Target Organs**

May cause damage to the following organs:

- Eyes
- Respiratory System

**Effects of Overexposure**

Carcinogenicity: Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2b) through inhalation (not ingestion), based on lifetime inhalation studies of rats. The IARC's findings were consistent with the massive accumulation of fine dust particles in the rat's lung (which overwhelm the natural lung clearance mechanisms, causing lung overloading) and consequent pulmonary overload and inflammation that causes lung cancer. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. Epidemiology studies on more than 20,000 workers do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. If present in this product, the titanium dioxide is in a "wet out" form and does not pose an inhalation hazard.

Carcinogenicity: This product may contain carbon black, a substance that has been listed by OSHA as a carcinogen to humans when inhaled. If present in this product, it is pre-dispersed in a liquid and not available as a dust. Under normal use conditions it would not be considered a hazard. IARC characterized carbon black as a possible human carcinogen (Group 2B) and concluded that there is sufficient evidence in experimental animals for the carcinogenicity of inhaled carbon black dust and inadequate evidence of carcinogenicity in humans. The IARC's findings were consistent with the massive accumulation of fine dust particles in the lung which overwhelm the natural lung clearance mechanisms, known as "lung overload" phenomenon, rather than from a specific chemical effect from the carbon black in the lung. NIOSH recommends that only carbon blacks with a PAH level greater than 0.1% be considered potential occupational carcinogens.

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
</table>

SDS for: Aliphatic ClearCoat (B-Side)
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

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>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO/IATA</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></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:
- 1333-86-4 Carbon Black 0 to 1 % Carcinogen
- 13463-67-7 Titanium Dioxide 0 to 10 % Carcinogen

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:
- None

Massachusetts Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:
- 1333-86-4 Carbon Black 0 to 1 %
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:
- 1333-86-4 Carbon Black 0 to 1%
- 13463-67-7 Titanium Dioxide 0 to 10%

Pennsylvania Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:
- 1333-86-4 Carbon Black 0 to 1%
- 13463-67-7 Titanium Dioxide 0 to 10%

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:
- None

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

### Country | Regulation | All Components Listed
--- | --- | ---
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 | No
EU | EU REACH List of Registered Intermediates | No
EU | EU REACH List of Pre-Registered Substances | No
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

### 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) National Fire Protection Association (NFPA)

<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>1</td>
<td>0</td>
<td></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: 7/23/2019

Reviewer Revision