Propel R152A
Safety Data Sheet
According to Federal Register Rules and Regulations
Revision date: 01/15/2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Substance
Trade name: Badger Air Brush Co. Propel – 7 oz, 13 oz
CAS No: 75-37-6
Product code: 50-002, 50-202,
Formula: C2H4F2
Synonyms: 1,1-difluoroethane / 1,1-Difluoroethane (refrigerant gas R 152a) / algofrene type 67 /
difluoroethane / dymel 152 / dymel 152A / ethane, 1,1-difluoro- / ethylene fluoride (=1,1difluoroethane) / ethylidene difluoride / ethylidene fluoride / FC 152A / fluorocarbon 152A / freon /
152 / freon 152A / genetron 100 / genetron 152 / genetron 152A / halocarbon R 152A / HCFC-152a / HF
C-152a / hydrofluorocarbon 152A / refrigerant 152A

1.2. Relevant identified uses of the substance/mixture and uses advised against

Use of the substance/mixture: Propellant for Spray Painting

1.3. Details of the supplier of the safety data sheet

MAX PRO
P.O. BOX 9962
FT LAUDERDALE, FL
33310
T 954-972-3338

1.4. Emergency telephone number

Emergency number: CHEMTREC 24 Hour 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)
Liquefied gas H280

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Warning

Hazard statements (GHS-US): H280 - Contains gas under pressure; may explode if heated
Precautionary statements (GHS-US):
P251 - Pressurized container: Do not pierce or burn, even after use
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

2.3. Other hazards

Other hazards not contributing to the classification: In accordance with aerosol flammability definitions, this product is non-flammable. However, the pressurized liquefied gas is extremely flammable. Using this product in an upside-down position, or shaking while using, can cause liquid product to be expelled. The information pertaining to flash point below applies to the liquefied gas. Contact with liquid may cause cold burns/frostbite. Contains gas under pressure; may explode if heated. Asphyxiant in high concentrations.
2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name: 1,1-Difluoroethane, liquefied, under pressure
CAS No: 75-37-6
EC no: 200-866-1

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-Difluoroethane, liquefied, under pressure (Main constituent)</td>
<td>(CAS No)75-37-6</td>
<td>&gt; 99</td>
<td>Liquefied gas, H280</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact: Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion: Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Contains refrigerated gas; may cause cryogenic burns or injury. Not expected to present a significant hazard under anticipated conditions of normal use.


Symptoms/injuries after skin contact: Frostbites.

Symptoms/injuries after eye contact: No data available.

Symptoms/injuries after ingestion: Not applicable.

Chronic symptoms: No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD. Extremely flammable. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapor spreads at floor level: ignition hazard.
Explosion hazard: DIRECT EXPLOSION HAZARD. Gas/vapor explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk. may be ignited by sparks.

Reactivity: On heating/burning: release of toxic and corrosive gases/vapor e.g.: hydrofluoric acid, carbonylfluoride. Reacts violently with (strong) oxidizers.

5.3. Advice for firefighters

Firefighting instructions: If no hazard for/from the surroundings: controlled burning. If hazardous substances are nearby: consider extinguishment. Extinguish only if gas supply/leak can be shut afterwards. Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray.


Other information: NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges. Eliminate every possible source of ignition. No naked lights. No smoking.

6.1.1. For non-emergency personnel


6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Tip the container on one side to stop the leakage. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapor with water curtain. Provide equipment/receptacles with earthing. Do not spray water on unheated tank walls. Do not use compressed air for pumping over spills.

Methods for cleaning up: Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. See "Material-handling" for suitable container materials. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling: Comply with the legal requirements. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not use compressed air for pumping over. Use spark/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Measure the concentration in the air regularly. Measure the oxygen concentration in the air. Work under local exhaust/ventilation.

Hygiene measures: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use. Keep in fireproof place. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Incompatible products: Strong bases. Strong acids.

01/15/2015 EN (English US)
Incompatible materials: Sources of ignition. Direct sunlight. Heat sources.

Storage temperature: < 50 °C

Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.


Special rules on packaging: SPECIAL REQUIREMENTS: with pressure relief valve. clean. correctly labelled. meet the legal requirements.

Packaging materials: SUITABLE MATERIAL: steel. stainless steel. monel steel. lead. aluminium. copper. tin.

7.3. Specific end use(s)
Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls: Local exhaust ventilation. vent hoods.

Personal protective equipment: Avoid all unnecessary exposure. Gloves. Safety glasses.

Materials for protective clothing: GIVE GOOD RESISTANCE: butyl rubber. leather. neoprene. polyethylene. PVC.

Hand protection: Insulated gloves.

Eye protection: Safety glasses.

Skin and body protection: Protective clothing.

Respiratory protection: High vapor/gas concentration: self-contained respirator. Maintain oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if oxygen levels are below 19.5% or during emergency response to a release of this product. Wear appropriate mask.

Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Gas

Appearance: Liquefied gas.

Molecular mass: 66.05 g/mol

Color: Colorless.

Odor: Mild odor. Slight Ether-like odor

Odor threshold: No data available

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: -117 °C

Freezing point: No data available

Boiling point: -25 °C

Flash point: < -50 °C

Critical temperature: -114 °C
### 9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC content</td>
<td>0 %</td>
</tr>
<tr>
<td>Gas group</td>
<td>Liquefied gas</td>
</tr>
<tr>
<td>Other properties</td>
<td>Gas/vapor heavier than air at 20°C. May generate electrostatic charges.</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapor e.g.: hydrofluoric acid, carbonylfluoride. Reacts violently with (strong) oxidizers.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid


#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products


### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition temperature</td>
<td>455 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure at 50 °C</td>
<td>11700 hPa</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>44960 hPa</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>2.3</td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1.0 (-25 °C)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Poorly soluble in water. Soluble in organic solvents. Water:</td>
</tr>
<tr>
<td>Log Pow</td>
<td>0.75 (Experimental value)</td>
</tr>
<tr>
<td>Log Kow</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>4 - 19 vol %</td>
</tr>
<tr>
<td></td>
<td>112 - 518 g/m³</td>
</tr>
</tbody>
</table>

| Solubility                    | 0.54 g/100ml (0 °C)                                                  |
| Log Pow                       | 0.75 (Experimental value)                                            |
| Log Kow                       |                                                                      |
| Viscosity, kinematic          | No data available                                                    |
| Viscosity, dynamic            |                                                                      |
| Explosive properties          |                                                                      |
| Oxidizing properties          | No data available                                                    |
| Explosive limits              |                                                                      |
| 9.2. Other information        |                                                                      |
| VOC content                   | 0 %                                                                   |
| Gas group                     | Liquefied gas                                                        |
| Other properties              | Gas/vapor heavier than air at 20°C. May generate electrostatic charges. |

### SECTION 11: Toxicological information

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<tr>
<td></td>
<td>112 - 518 g/m³</td>
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</table>

| Solubility                    | 0.54 g/100ml (0 °C)                                                  |
| Log Pow                       | 0.75 (Experimental value)                                            |
| Log Kow                       |                                                                      |
| Viscosity, kinematic          | No data available                                                    |
| Viscosity, dynamic            |                                                                      |
| Explosive properties          |                                                                      |
| Oxidizing properties          | No data available                                                    |
| Explosive limits              |                                                                      |
Acute toxicity: Not classified

R152A (75-37-6)

LC50 inhalation rat (mg/l) 176 mg/l/4h (Rat; Literature study)

LC50 inhalation rat (ppm) > 437500 ppm/4h Mortality in 2/6 at 43.75% and 1/6 at 38.3%. At ≥ 17.52% lethargy, laboured breathing, reduced responsiveness to sound were observed. At 6.64% only hyperaemia and shallow breathing were observed.

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified Based on available data, the classification criteria are not met

Carcinogenicity: Not classified Based on available data, the classification criteria are not met

Reproductive toxicity: Not classified Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure): Not classified Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms:


Symptoms/injuries after skin contact: Frostbites.

Symptoms/injuries after eye contact: No data available.

Symptoms/injuries after ingestion: No applicable.

Chronic symptoms: No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.

Ecology - water Mild water pollutant (surface water). No data available on ecotoxicity.

12.2. Persistence and degradability

R152A (75-37-6)

Persistence and degradability Biodegradability in water: no data available.

12.3. Bioaccumulative potential

R152A (75-37-6)

Log Pow 0.75 (Experimental value)

Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information: Avoid release to the environment.
### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Refer to manufacturer/supplier for information on recovery/recycling.

Additional information: LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials: Avoid release to the environment.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN:

**US DOT (ground):** UN1030, 1,1-Difluoroethane, R152A Flammable, 2.1

**ICAO/IATA (air):** UN1950, Aerosols, Flammable, 2.1, Limited Quantity

**IMO/IMDG (water):** UN1950, Aerosols, Flammable, 2.1, Limited Quantity

**Special Provisions:** DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and ‘DOT-SP 11516’

#### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>DOT Proper Shipping Name</th>
<th>1,1-Difluoroethane, R152A Flammable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Transportation (DOT) Hazard Classes</td>
<td>2.1 - Class 2.1 - Flammable gas 49 CFR 173.115</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>2.1 - Flammable gas</td>
</tr>
</tbody>
</table>

DOT Special Provisions (49 CFR 172.102): DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and ‘DOT-SP 11516’

DOT Packaging Exceptions (49 CFR 173.xxx): 306

DOT Packaging Non Bulk (49 CFR 173.xxx): 304

DOT Packaging Bulk (49 CFR 173.xxx): 314;315

#### 14.3. Additional information

Other information: No supplementary information available.

Special transport precautions: DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and ‘DOT-SP 11516’

**Overland transport**

<table>
<thead>
<tr>
<th>Class (ADR)</th>
<th>2 - Gases</th>
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</thead>
<tbody>
<tr>
<td>Hazard identification number (Kemler No.)</td>
<td>23</td>
</tr>
<tr>
<td>Classification code (ADR)</td>
<td>2F</td>
</tr>
<tr>
<td>Hazard labels (ADR)</td>
<td>2.1 - Flammable gases</td>
</tr>
</tbody>
</table>

01/15/2015 EN (English US)
Tunnel restriction code (ADR) : B/D

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”

EmS-No. (1) : F-D
EmS-No. (2) : S-U

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 : 150 kg CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

R152A (75-37-6)

SARA Section 311/312 Hazard Classes

| Fire hazard | Sudden release of pressure hazard |
| Immediate (acute) health hazard |

15.2. International regulations

CANADA

R152A (75-37-6)

WHMIS Classification

| Class A - Compressed Gas |
| Class B Division 5 - Flammable Aerosol |

15.2.2. National regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Gas 1 H220 Press.
Gas

Full text of H-phrases: see section 16


R12

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

01/15/2015
EN (English US)
15.3. US State regulations
R152A (75-37-6)

<table>
<thead>
<tr>
<th>State or local regulations</th>
<th>U.S. - New Jersey - Right to Know Hazardous Substance List</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td></td>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Indication of changes: Revision - See "*".
Other information: None.
Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>Liquefied gas</th>
<th>Gases under pressure Liquefied gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
</tbody>
</table>

NFPA health hazard: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.
NFPA reactivity: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

HMIS III Rating:
Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 4 Severe Hazard
Physical: 1 Slight Hazard
Personal Protection: B

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product.

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness. NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.  

Liquefied gas  Gases under pressure Liquefied gas  
H280  Contains gas under pressure; may explode if heated
MATERIAL SAFETY DATA SHEET

Product/Substance Identification
Fused Aluminum Oxide

Chemical Family:
Metal Oxides

Trade Names/Synonyms: Alundum; alumina; Dialuminum Trioxide; Aluminum Sesquioxide; Alpha-Alumina; Beta-Alumina; Gamma-Alumina; Corundum; Alumite; Almite; Martoxin; Baikalox Polishing Chemicals (Baikowski International Co.); Tabular Alumina (ALCOA); Aluminum Oxide (AL2O3); Aluminum Trioxide; Linde A,B,C (Union Carbide Corporation); D Alumina Powders (Union Carbide Corporation); 420003704; WESGO Alumina Ceramics; AL2O3; CMC00950;

Company Name: Illinois Valley Minerals LLC.
575 N 18th Mile Road
Tonica, Illinois 61370

Company Emergency Telephone No: 815-442-8402
CHEMTREC® 800-424-9300

HMIS Number: 1

Composition

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>CAS</th>
<th>OSHA PEL(1)</th>
<th>ACGIH TLV(2)</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide 94 -100%</td>
<td>1344-28-1</td>
<td>15Mg/M3 (Total dust)</td>
<td>10 Mg/M3</td>
<td>(RTECS) BD1200000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5Mg/M3 (resp fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide 0 - 4%</td>
<td>13463-67-7</td>
<td>15Mg/M3 (Total dust)</td>
<td>10 Mg/M3</td>
<td>(RTECS) XR2275000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5Mg/M3 (resp fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide 0 - 1.3%</td>
<td>7631-86-9</td>
<td>20 mppcf (80mg/m3/%SiO2)</td>
<td>10 Mg/M3</td>
<td>(RTECS) VV731000 REL=TWA 6Mg/M3</td>
</tr>
</tbody>
</table>

1 Occupation Safety and Health Administration final rule permissible exposure limits.
2 American Conference of Governmental. Industrial Hygienists threshold limit values.

Physical & Chemical Characteristics

Appearance and odor: White to Gray/Brown crystals or powder, Odorless.

Boiling Point: 5396F, 2980C
Melting Point: 3727-3762F, 2053-2072C

Vapor Pressures: 1 mmHg @ 2158 C
Vapor Density: NA

PH: NA
Specific Gravity: (H2O = 1) 3.965 @ 25 C

Molecular weight: 101.96
Evaporation Rate: NA

Solubility in water: Insoluble

Solvent Solubility: Slightly soluble: mineral acids, strong alkali. Practically Insoluble: nonpolar organic solvents

Volatility: <0.5%

Fire and Explosion Hazard Data

Flash Point: NA

Flammable Limits: NA

Extinguishing Media: Water spray, Dry Chemical, Carbon Dioxide (CO2), Foam

Lower/Upper Explosion Limits: NA

Special Fire Fighter Procedures: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Unusual F & E Hazards: None (Material NOT combustible)

Incompatibilities and Reactivity Data
Stability: Stable
Incompatibility: Halo carbons, halogens, combustible materials, oxidizing materials
Chlorinated rubber (Hot), Chlorine Trifluoride (Violent reaction & possible ignition), Ethylene Oxide (may initiate explosive polymerization), Halocarbons (Exothermic reaction above 200 °C), Halocarbons + Metals (Exothermic reaction at ambient temperatures), Oxygen Difluoride (Exothermic reaction), Sodium Nitrate (may form explosive mixture), Vinyl acetate (Possible vigorous reactions).

Hazardous Decomposition or By-Products: Thermal decomposition products: miscellaneous decomposition products.

Conditions to avoid: Generating dust

First Aid measures

Inhalation: Move to fresh air. If difficulty-breathing oxygen may be administers. Seek medical attention if needed.
Skin contact: Wash exposed areas with soap and water use. If irritation persists, seek medical attention.
Eye contact: Flush with water. If irritation persists, seek medical attention.
Ingestion: Seek medical attention if needed.

Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Sweep, shovel or vacuum materials. Limit exposure to dust.
Waste Disposal method: Comply with all state, federal and local regulations.
Precautions to be taken in handling and storing: Limit generation of dust. Keep separate from incompatible substances.

Control Measures

Respiratory Protection: As needed. NIOSH approved dust respirator recommended for limiting exposure. Similar respiratory protection required at concentrations above PEL.
Ventilation: Adequate local exhaust.
Protective Gloves: As needed
Eye Protection: Safety Goggles as needed.

Sara Title III Reporting

To the best of our knowledge, this product does not contain any substance requiring on the SARA, Title III, Section 313 list.

The information published in this Material Safety Data Sheet has been complied from our experience, and data presented in various technical publications. It is the user’s responsibility to determine the suitability of this information for the user’s application and for adopting necessary safety precautions.

Reviewed and Approved - 2013