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Dymonic® FC

High-Performance, Fast-Curing, Single-Component, Hybrid Sealant

Product Description

Dymonic® FC is a high-performance, fast-curing, single-component, lowmodulus, hybrid sealant, formulated with proprietary silane end-capped polymer technology.

Basic Uses

Dymonic FC is a durable, flexible, sealant that offers excellent performance in moving joints and exhibits tenacious adhesion once fully cured. Typical applications for Dymonic FC include expansion and control joints, precast concrete panel joints, perimeter caulking (windows, door, panels), EIFS, aluminum, masonry and vinyl siding.

Features and Benefits

- Dymonic FC is fast curing with a skin time of 60 min and a tack-free time of 3 to 4 hr to significantly reduce dirt attraction.
- Dymonic FC will not green crack due to early movement and has an exceptional movement capability of ± 35%. ventilation, Personal Protective Equipment (PPE) and other health concerns.
- · Do not use in chlorinated, potable, heavy or wastewater.
- Although Dymonic FC is paintable, this does not imply adhesion to and compatibility with all paints. Please refer to Tremco Technical Bulletin No. S-09-05 for more information.

Coverage Rates

308' of joint per gallon for a 1/4" x 1/4" (6 mm x 6 mm) joint. For specific coverage rates that include joint size and usage efficiencies, visit our website usage calculator at www.tremcosealants.com.

Packaging

10.1-oz (300-mL) cartridges; 20-oz (600-mL) sausages

Colors

Almond, Anodized Aluminum, Aluminum Stone, Beige, Black, Bronze, Buff, Dark Bronze, Gray, Hartford Green, Ivory, Limestone, Natural Clay, Off White, Precast White, Redwood Tan, Stone and White.

Availability

Immediately available from your local Tremco Field Representative, Tremco Distributor or Tremco Warehouse.

Storage

Store Dymonic FC in original, undamaged packaging in a clean, dry, protected location with temperatures between 40 to 110 $^{\circ}$ F (5 to 43 $^{\circ}$ C).

Applicable Standards

Dymonic FC meets or exceeds the requirements of the following specifications:

- ASTM C920 Type S, Grade NS, Class 35, Use NT, M, A and O
- ASTM C1248
- U.S. Federal Specification TT-S-00230C Class A, Type II
- CAN/CGSB 19.13-M87

• UL 2079 (ASTM E 1966), CAN-4-S115M

Fire Rated Systems

FF-D-1063, FW-D-1059, HW-D-1054, WW-D-1054

Limitations

- · Do not apply over damp or contaminated surfaces.
- · Do not use under polyurethane deck coatings.
- Use with adequate ventilation. Always utilize the sealant's MSDS found on our website at www.tremcosealants.com for information on proper ventilation, Personal Protective Equipment (PPE) and other health concerns. Don't use in chlorinated, potable, heavy or wastewater.
- Although Dymonic FC is paintable, this does not imply adhesion to and compatibility with all paints. Please refer to Tremco Technical Bulletin No. S-09-05 for more information.



Substrate Preparation

Surfaces must be sound and clean. All release agents, existing waterproofing, dust, loose mortar, paints, other finishes or field applied coating must be removed. This can be accomplished with a thorough wire brushing, grinding, sandblasting, or solvent washing, depending on the contamination. Tremco recommends that surface temperatures be 40 °F (5 °C) or above at the time the sealant is applied. If sealant must be applied in temperatures below 40 °F, please refer to the Tremco Technical Bulletin for Applying Sealants in Cold Conditions (No. S-08-44 rev 1) that can be found on our website at www.tremcosealants.com

Priming

Dymonic FC typically adheres to common construction substrates without primers; however, due to the variability of substrate finishes such as Kynar and anodized aluminum, Tremco always recommends that a mockup or field adhesion test be performed on the actual materials being used on the job to verify the need for a primer, proper cleaning and prep requirements. A description of the field adhesion test can be found in appendix X1 of ASTM C1193, Standard Guide for Use of Joint Sealants. Where deemed necessary, use TREMprime Silicone Porous Primer for porous surfaces and TREMprime Silicone Metal Primer for metals or plastics.

Application

Dymonic FC is easy to apply with conventional caulking equipment. Ensure that the backer rod is friction fitted properly and any primers have been applied. Fill the joint completely with a proper width-to-depth ratio and then tool to ensure intimate contact of sealant with joint walls. Dry tooling is always preferred, although xylene can be used in limited amounts to slick the spatula if needed following the initial dry tooling. For a cleaner finish, mask the sides of the joint with tape prior to filling.

Joint Design

Dymonic FC may be used in any joint designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4" (6 mm).

Join Backing

Closed cell or reticulated polyethylene backer rod is recommended as joint backing to control sealant depth and to ensure intimate contact of sealant with joint walls when tooling. Where depth of joint will prevent the use of backer rod, an adhesive backed polyethylene tape (bond breaker tape) should be used to prevent three-sided adhesion. All backing should be dry at time of sealant application.

Sealant Dimensions

W = Sealant width, D = Sealant depth, C = Contact area.



EXPANSION JOINTS - The minimum width and depth of any sealant application should be $1/4^{\circ} \times 1/4^{\circ}$ (6 mm by 6 mm). The depth (D) of sealant may be equal to the width (W) of joints that are less than $1/2^{\circ}$ (13 mm) wide.

For joints ranging from 1/2" to 1" (13 mm to 25 mm) wide, the sealant depth should be approximately one-half of the joint width. The maximum depth (D) of any sealant application should be 1/2" (13 mm). For joints that are wider than 1" (25 mm) contact Tremco Technical Services or your local Sales Rep.

WINDOWS PERIMETERS- For fillet beads, or angle beads around windows and doors, the sealant should exhibit a minimum surface contact area [C] of 1/4" (6 mm) onto each substrate. Proper joint backing or bond breaking should be provided to allow for anticipated movement.

Cure Time

Dymonic FC generally cures at a rate of 3/32" per day at 75 °F (24 °C) and 50% RH. Dymonic FC will skin in 1 hr and be tack-free in 3 to 4 hr. The cure time will increase as temperatures and/or humidity decrease. A good rule of thumb is one additional day for every 10 °F decrease in temperature

Clean Up

Excess sealant and smears adjacent to the joint interface can be carefully removed with xylene or mineral spirits before the sealant cures. Any utensils used for tooling can also be cleaned with xylene or mineral spirits.

Warranty

Tremco warrants its Products to be free of defects in materials but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE with respect to Tremco Products. Tremco's sole obligation shall be, at its option, to replace or refund the purchase price of the quantity of Tremco Products proven to be defective, and Tremco shall not be liable for any loss or damage.

Please refer to our website at <u>www.tremcosealants.com</u> for the most up-to-date Product Data Sheets.

NOTE: All Tremco Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.

| TYPICAL PHYSICAL PROPERTIES | | | | |
|------------------------------|----------------------|---|--|--|
| PROPERTY | TEST METHOD | TYPICAL VALUES | | |
| Туре | | Single Component Hybrid Urethane Sealant | | |
| Color | | Almond, Beige, Black, Anodized Aluminum, Aluminum Stone, Bronze, Buff, Dark Bronze, Gray, Hartford Green, Ivory, Limestone, Natural Clay, Off White, Precast White, Redwood Tan, Stone and White. | | |
| Solids | | 100 | | |
| Specific Gravity | | 1.454 | | |
| Application | | Gun-grade sealant, applied with typical caulking equipment | | |
| Service Temperature | | -40°F (-40°C) to 185°F (85°C) | | |
| Rheological Properties | ASTM C639 | Non-sag (NS), 0" of sag in channel | | |
| Extrusion Rate | ASTM C1183 | 93.1 mL/min | | |
| Hardness Properties | ASTM C661 | 25 | | |
| Weight Loss | ASTM C1246 | Pass | | |
| Skin Time | ASTM C679 | 1 hr | | |
| Tack Free Time | 73.4°F (23°C) 50% RH | 3 to 4 hr | | |
| Stain and Color Change | ASTM C510 | No visible color change/No stain | | |
| Adhesion to Concrete | ASTM C794 | 18 to 22 pli (80 to 98 N) | | |
| Adhesion to Aluminum | ASTM C794 | 20 to 25 pli (89 to 112 N) | | |
| Effects of Accelerated Aging | ASTM C793 | Pass | | |
| Movement Capability | ASTM C719 | ± 35% | | |

0220/DFCDS-ST

3735 Green Rd Beachwood OH 44122 216.292.5000 / 800.321.7906 Tremco Commercial Sealants & Waterproofing

1451 Jacobson Ave Ashland OH 44805 419.289.2050 / 800.321.6357 220 Wicksteed Ave Toronto ON M4H1G7 416.421.3300 / 800.363.3213

1445 Rue de Coulomb Boucherville QC J4B 7L8 514.521.9555



SAFETY DATA SHEET

1. Identification

Material name: DYMONIC FC WHITE Material: 960806 323

Recommended use and restriction on use

Recommended use: Sealant Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco Canadian Sealants 220 Wicksteed Ave Toronto ON M4H 1G7 CA

Contact person: Telephone: Emergency telephone number:

EH&S Department 1-800-263-6046 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

| Carcinogenicity | Category 1A |
|-----------------------|-------------|
| Toxic to reproduction | Category 1B |

Unknown toxicity - Health

| Acute toxicity, oral | 13.72 % |
|-----------------------------------|---------|
| Acute toxicity, dermal | 17.83 % |
| Acute toxicity, inhalation, vapor | 99.62 % |
| Acute toxicity, inhalation, dust | 99.82 % |
| or mist | |

Environmental Hazards

Acute hazards to the aquatic Category 2 environment

Unknown toxicity - Environment

| Acute hazards to the aquatic | 45.04 % |
|--------------------------------|---------|
| environment | |
| Chronic hazards to the aquatic | 100 % |
| environment | |

Label Elements

Hazard Symbol:





| | • | |
|---------------------|---------------------------------|--|
| | Signal Word: | Danger |
| | Hazard Statement: | May cause cancer. May damage fertility or the unborn child. Toxic to aquatic life. |
| | Precautionary Statements | |
| | Prevention: | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. |
| | Response: | IF exposed or concerned: Get medical advice/attention. |
| | Storage: | Store locked up. |
| | Disposal: | Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |
| Hazard(classifi | (s) not otherwise ed (HNOC): | None. |

3. Composition/information on ingredients

Mixtures

| Chemical Identity | CAS number | Content in percent (%)* |
|---|------------|-------------------------|
| Calcium carbonate | 471-34-1 | 30 - 60% |
| Butyl benzyl phthalate | 85-68-7 | 10 - 30% |
| Calcium Carbonate (Limestone) | 1317-65-3 | 7 - 13% |
| Titanium dioxide | 13463-67-7 | 1 - 5% |
| Calcium oxide | 1305-78-8 | 1 - 5% |
| Stearic acid | 57-11-4 | 0.5 - 1.5% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:

Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Inhalation:

Move to fresh air.



| Skin Contact: | Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention. | | |
|--|---|--|--|
| Eye contact: | Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention. | | |
| Most important symptoms/effects | s, acute and delayed | | |
| Symptoms: | May cause skin and eye irritation. | | |
| Indication of immediate medical at | ttention and special treatment needed | | |
| Treatment: | Symptoms may be delayed. | | |
| 5. Fire-fighting measures | | | |
| General Fire Hazards: | No unusual fire or explosion hazards noted. | | |
| Suitable (and unsuitable) extinguishing media | | | |
| Suitable extinguishing media: | Use fire-extinguishing media appropriate for surrounding materials. | | |
| Unsuitable extinguishing media: | Do not use water jet as an extinguisher, as this will spread the fire. | | |
| Specific hazards arising from the chemical: | During fire, gases hazardous to health may be formed. | | |
| Special protective equipment and | d precautions for firefighters | | |
| Special fire fighting procedures: | No data available. | | |
| Special protective equipment for fire-fighters: | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. | | |
| 6. Accidental release measures | | | |
| Personal precautions, protective equipment and emergency procedures: | No data available. | | |
| Methods and material for containment and cleaning up: | Collect spillage in containers, seal securely and deliver for disposal according to local regulations. | | |
| Notification Procedures: | In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. | | |



| Environmental Precautions: | Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment. |
|---|---|
| 7. Handling and storage | |
| Precautions for safe handling: | Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. |
| Conditions for safe storage, including any incompatibilities: | Store locked up. |

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Туре | Exposure Limit Values | Source |
|--------------------------------|---------------|-----------------------|--|
| Calcium carbonate - Total | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| dust. | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| Respirable fraction. | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| (Limestone) - Total dust. | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| (Limestone) - Respirable | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| fraction. | | | |
| Titanium dioxide | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Titanium dioxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Titanium dioxide - Respirable | TWA | 15 millions of | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| fraction. | | particles per | 2016) |
| | | cubic foot of | |
| | | air | |
| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | | 2016) |
| Titanium dioxide - Respirable | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| fraction. | | | 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | particles per | 2016) |
| | | cubic foot of | |
| | | air | |
| Calcium oxide | IWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Stearic acid - Respirable | IWA | 3 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| fraction. | T \A(A | 10 | |
| Stearic acid - Inhalable | IWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| fraction. | T) A (A | E as also | |
| Hydrotreated heavy | IWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (03 2014) |
| haphinenic distillate - | | | |
| Innalable fraction. | DEI | 500 mm 0 000 mm/m2 | |
| nyulutreated neavy | PEL | 500 ppm 2,000 mg/m3 | US. USHA LADIE Z-1 LIMITS TOF AIR Contominants (20 CEP 1010 1000) (02 2006) |
| | DEI | 5 m m/m 2 | Contaminants (29 CFR 1910, 1000) (02 2006) |
| nyulotreated neavy | PEL | 5 mg/m3 | US. USHA TADIE 2-1 LIMITS TOF AIF |
| Aluminum ovido Boonirable | T\A/ A | 1 ~~~/~~? | US ACCIH Threshold Limit Values (2014) |
| fraction | IVVA | i mg/m3 | US. AUGIA I nresnoid Limit Values (2011) |
| maction. | | | |



| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air |
|------------------------------|-----|----------------|---|
| | | | Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum oxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air |
| | | _ | Contaminants (29 CFR 1910.1000) (02 2006) |
| | TWA | 50 millions of | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | particles per | 2016) |
| | | cubic foot of | |
| | | air | |
| Aluminum oxide - Respirable | TWA | 15 millions of | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| fraction. | | particles per | 2016) |
| | | cubic foot of | |
| | | air | |
| | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | - | 2016) |
| Aluminum oxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | _ | 2016) |

| Chemical name | Туре | Exposure Limit Values | Source |
|--|------|-----------------------|--|
| Calcium carbonate - Total dust. | STEL | 20 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium carbonate - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium Carbonate (Limestone) - Total dust. | STEL | 20 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |



| Calcium Carbonate (Limestone) - Respirable fraction. | TWA | | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|--|------|--------|-----------|--|
| Calcium Carbonate (Limestone) - Total dust. | TWA | | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Diisodecyl phthalate | TWA | | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Titanium dioxide - Total dust. | TWA | | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide - Respirable fraction. | TWA | | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide | TWA | | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Titanium dioxide - Total dust. | TWA | | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium oxide | TWA | | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium oxide | TWA | | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Vinyltrimethoxysilane | STEL | 10 ppm | 60 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Hydrotreated heavy naphthenic distillate - Mist. | TWA | | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | TWA | | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Hydrotreated heavy naphthenic distillate - Mist. | STEL | | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |

Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.



Individual protection measures, such as personal protective equipment

| General information: | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc. |
|-------------------------------------|--|
| Eye/face protection: | Wear safety glasses with side shields (or goggles). |
| Skin Protection Hand Protection: | Use suitable protective gloves if risk of skin contact. |
| Other: | Wear suitable protective clothing. |
| Respiratory Protection: | In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor. |
| Hygiene measures: | Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. |

9. Physical and chemical properties

| Appearance | |
|---|---|
| Physical state: | solid |
| Form: | Paste |
| Color: | White |
| Odor: | Mild |
| Odor threshold: | No data available. |
| pH: | No data available. |
| Melting point/freezing point: | No data available. |
| Initial boiling point and boiling range: | No data available. |
| Flash Point: | > 93 °C > 199 °F |
| Evaporation rate: | Slower than n-Butyl Acetate |
| Flammability (solid, gas): | No |
| Upper/lower limit on flammability or explosive limits | |
| Flammability limit - upper (%): | No data available. |
| Flammability limit - lower (%): | No data available. |
| Explosive limit - upper (%): | No data available. |
| Explosive limit - lower (%): | No data available. |
| Vapor pressure: | No data available. |
| Vapor density: | Vapors are heavier than air and may travel along the floor and in the bottom of containers. |
| Relative density: | 1.5364 |
| Solubility(ies) | |
| Solubility in water: | Insoluble in water |



| Solubility (other): | No data available. |
|--|--------------------|
| Partition coefficient (n-octanol/water): | No data available. |
| | |
| Auto-ignition temperature: | No data available. |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |
| | |

10. Stability and reactivity

| Reactivity: | No data available. |
|--------------------------------------|---|
| Chemical Stability: | Material is stable under normal conditions. |
| Possibility of hazardous reactions: | No data available. |
| Conditions to avoid: | Avoid heat or contamination. |
| Incompatible Materials: | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| Hazardous Decomposition Products: | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

11. Toxicological information

Information on likely routes of exposure

| Inhalation: | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
|---------------|---|
| Skin Contact: | May be harmful in contact with skin. Causes mild skin irritation. |
| Eye contact: | Eye contact is possible and should be avoided. |
| Ingestion: | May be ingested by accident. Ingestion may cause irritation and malaise. |

Symptoms related to the physical, chemical and toxicological characteristics

| Inhalation: | No data available. |
|---------------|--------------------|
| Skin Contact: | No data available. |
| Eye contact: | No data available. |
| Ingestion: | No data available. |

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

| Oral |
|----------|
| Product: |

20,400.00 mg/kg ATEmix : 21,247.91 mg/kg



| Dermal Product: | ATEmix: 4,310.79 mg/kg | |
|---|---|--|
| Inhalation Product: | Not classified for acute toxicity based on available data. | |
| Repeated dose toxicity Product: | No data available. | |
| Skin Corrosion/Irritation Product: | No data available. | |
| Serious Eye Damage/Eye Irritatio Product: | on No data available. | |
| Respiratory or Skin Sensitization Product: | n No data available. | |
| Carcinogenicity Product: | No data available. | |
| IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: | | |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. | |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. | |
| US. National Toxicology Program (NTP) Report on Carcinogens: Hydrotreated heavy Known To Be Human Carcinogen. naphthenic distillate | | |
| US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No carcinogenic components identified | | |
| Germ Cell Mutagenicity | | |
| In vitro Product: | No data available. | |
| In vivo Product: | No data available. | |
| Reproductive toxicity Product: | May damage fertility or the unborn child. | |
| Specific Target Organ Toxicity - Product: | Single Exposure No data available. | |
| | | |



| Product: | No data available. |
|-------------------------------|--------------------|
| Aspiration Hazard Product: | No data available. |
| Other effects: | No data available. |

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

| Fish Product: | No data available. | |
|---|-----------------------------|--|
| Aquatic Invertebrates Product: | No data available. | |
| Chronic hazards to the aquati | c environment: | |
| Fish Product: | No data available. | |
| Aquatic Invertebrates Product: | No data available. | |
| Toxicity to Aquatic Plants Product: | No data available. | |
| Persistence and Degradability | | |
| Biodegradation Product: | No data available. | |
| BOD/COD Ratio Product: | No data available. | |
| Bioaccumulative potential Bioconcentration Factor (BCF) Product: No data available. | | |
| Partition Coefficient n-octanol / water (log Kow)Product:No data available. | | |
| Mobility in soil: | No data available. | |
| Other adverse effects: | Toxic to aquatic organisms. | |



| 13. Disposal considerations | |
|-----------------------------|---|
| Disposal instructions: | Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |
| Contaminated Packaging: | No data available. |
| 14. Transport information | |

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Butyl Benzyl Phthalate), 9, PG III, MARINE POLLUTANT

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

| Chemical Identity | Reportable quantity | |
|------------------------|---------------------|--|
| Butyl benzyl phthalate | 100 lbs. | |
| Dibutyl phthalate | 10 lbs. | |
| Methanol | 5000 lbs. | |
| Acetic acid | 5000 lbs. | |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.



SARA 304 Emergency Release Notification

| Chemical Identity | Reportable quantity |
|------------------------|----------------------------|
| Butyl benzyl phthalate | 100 lbs. |
| Diisodecyl phthalate | |
| Diisodecyl phthalate | |
| (mixed Is) | |
| Dibutyl phthalate | 10 lbs. |
| Methanol | 5000 lbs. |
| Acetic acid | 5000 lbs. |

SARA 311/312 Hazardous Chemical

| Chemical Identity | Threshold Planning Quantity |
|------------------------|-----------------------------|
| Calcium carbonate | 10000 lbs |
| Butyl benzyl phthalate | 10000 lbs |
| Calcium Carbonate | 10000 lbs |
| (Limestone) | |
| Titanium dioxide | 10000 lbs |
| Calcium oxide | 10000 lbs |
| Stearic acid | 10000 lbs |
| Hydrotreated heavy | 10000 lbs |
| naphthenic distillate | |
| Aluminum oxide | 10000 lbs |

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Calcium carbonate Butyl benzyl phthalate Calcium Carbonate (Limestone) Titanium dioxide Calcium oxide Hydrotreated heavy naphthenic distillate



US. Massachusetts RTK - Substance List

Chemical Identity Calcium carbonate Butyl benzyl phthalate Calcium Carbonate (Limestone) Titanium dioxide Calcium oxide Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Calcium carbonate Butyl benzyl phthalate Calcium Carbonate (Limestone) Diisodecyl phthalate Titanium dioxide Calcium oxide

US. Rhode Island RTK

Chemical Identity

Calcium carbonate Calcium Carbonate (Limestone) Titanium dioxide Calcium oxide

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC:

| Regulatory VOC (less water and exempt solvent) | : | 6 g/l |
|---|---|--------|
| VOC Method 310 | : | 0.38 % |



| Inventory Status: Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
|--|--|
| EINECS, ELINCS or NLP: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan (ENCS) List: | One or more components in this product are not listed on or exempt from the Inventory. |
| China Inv. Existing Chemical Substances: | One or more components in this product are not listed on or exempt from the Inventory. |
| Korea Existing Chemicals Inv. (KECI): | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada NDSL Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Philippines PICCS: | One or more components in this product are not listed on or exempt from the Inventory. |
| New Zealand Inventory of Chemicals: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan ISHL Listing: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan Pharmacopoeia Listing: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | All components in this product are listed on or exempt from the Inventory. |
| US TSCA Inventory: | All components in this product are listed on or exempt from the Inventory. |

16.Other information, including date of preparation or last revision

| Revision Date: | 11/30/2018 |
|----------------------|--------------------|
| Version #: | 2.1 |
| Further Information: | No data available. |



Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.