

## Poly-Crete Aggregate MD, SL, HF and TF/WR SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product Identifier:** Poly-Crete Aggregate MD, SL, HF and TF/WR

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** January 13, 2014

### 2. HAZARD(S) IDENTIFICATION

This product is one part of a 3 part product. Read and understand the hazard information on the SDS for Poly-Crete Resin and Poly-Crete Hardener before using this product.

**Classification:**

Physical	Health
Not Hazardous	Skin Irritation Category 2 Eye Damage Category 1 Skin Sensitization Category 1 Specific Target Organ Toxicity – Single Exposure Category 3 (Respiratory Irritation) Carcinogenicity Category 1A Specific Target Organ Toxicity – Repeat Exposure Category 1

**Labeling:**

**Danger!**



**Hazard statement(s)**

Causes skin irritation.  
Causes serious eye damage.  
May cause an allergic skin reaction.

**Precautionary statement(s)**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.

May cause respiratory irritation.  
 May cause cancer by inhalation.  
 Causes damage to lungs through prolonged or repeated inhalation exposure.

Do not breathe dust, fume.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Wear protective gloves, protective clothing, eye protection or face protection.  
 IF ON SKIN: Wash with plenty of soap and water.  
 If skin irritation or rash occurs: Get medical attention.  
 Take off contaminated clothing and wash it before reuse.  
 IF IN EYES: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing.  
 Immediately call a POISON CENTER or doctor.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER if you feel unwell.  
 IF exposed or concerned: Get medical attention.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Dispose of contents and container in accordance with local and national regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Portland Cement	65997-15-1	5-95%
Crystalline Silica	14808-60-7	0-90%
Calcium Sulfate	7778-18-9	0-10%
Iron Oxide	1309-37-1	0-15%
Calcium Carbonate	1317-65-3	0-5%
Magnesium Oxide	1309-48-4	0-5%
Calcium Oxide	1305-78-8	0-5%
Calcium Hydroxide	1305-62-0	0-5%

**The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.**

### 4. FIRST-AID MEASURES

**Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial ventilation. Get medical attention if irritation persists.

**Skin contact:** Remove contaminated clothing and launder before reuse. Wash skin with a cool water and pH-neutral soap. Get medical attention if irritation develops or persists.

**Eye contact:** Immediately flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get immediate medical attention.

**Ingestion:** If swallowed, drink 1 or 2 glasses of water to dilute. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

**Most important symptoms/effects, acute and delayed:** Dust may cause eye and skin irritation or burns. Wet cement may cause eye and skin damage. May cause skin sensitization. Inhalation of dust may cause mucous membrane and respiratory irritation. Prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis) and increase the risk of lung cancer. Risk of cancer depends on duration and level of exposure

**Indication of immediate medical attention and special treatment, if necessary:** If eye or skin burns occur, get immediate medical attention. For ingestion, get immediate medical attention.

## 5. FIRE-FIGHTING MEASURES

**Suitable (and unsuitable) extinguishing media:** Use media appropriate to the surrounding fire.

**Specific hazards arising from the chemical:** None known.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Wear appropriate protective clothing as described in Section 8.

**Environmental precautions:** Report releases as required by local and federal authorities.

**Methods and materials for containment and cleaning up:** Collect using dustless method and place in appropriate container for use or disposal. Do not use compressed air.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with the eyes and skin. Do not breathe dust. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation and proper dust collection methods to keep exposure level below occupational exposure limits. Wash thoroughly with soap and water after use.

Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

**Conditions for safe storage, including any incompatibilities:** Keep dry until ready to use. Store in a cool, dry, well ventilated area away from incompatible materials. Protect from physical damage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure guidelines:**

Portland Cement	5 mg/m <sup>3</sup> TWA OSHA PEL 10 mg/m <sup>3</sup> TWA ACGIH TLV
Crystalline Silica	<u>10 mg/m<sup>3</sup></u> TWA OSHA PEL (respirable fraction) % Silica + 2 0.025 mg/m <sup>3</sup> TWA ACGIH TLV (respirable fraction)
Calcium Sulfate	5 mg/m <sup>3</sup> TWA OSHA PEL (respirable fraction) 10 mg/m <sup>3</sup> TWA OSHA PEL (total dust) 10 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable fraction)
Iron Oxide	10 mg/m <sup>3</sup> TWA OSHA PEL (fume) 5 mg/m <sup>3</sup> TWA ACGIH TLV (respirable fraction)
Calcium Carbonate	5 mg/m <sup>3</sup> TWA OSHA PEL (respirable fraction) 10 mg/m <sup>3</sup> TWA OSHA PEL (total dust)
Magnesium Oxide	15 mg/m <sup>3</sup> TWA OSHA PEL (fume total particulate) 10 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable fraction)
Calcium Oxide	5 mg/m <sup>3</sup> TWA OSHA PEL 2 mg/m <sup>3</sup> TWA ACGIH TLV
Calcium Hydroxide	5 mg/m <sup>3</sup> TWA OSHA PEL (respirable fraction) 10 mg/m <sup>3</sup> TWA OSHA PEL (total dust) 5 mg/m <sup>3</sup> TWA ACGIH TLV

**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Individual protection measures, such as personal protective equipment:**

**Respiratory protection:** If the exposure limits are exceeded a NIOSH approved particulate respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.

**Skin protection:** Alkali/abrasive resistant gloves are recommended to prevent skin contact.

**Eye protection:** Chemical safety goggles are recommended to prevent eye contact.

**Other:** Impervious clothing as needed to avoid skin contact and contamination of personal clothing. A safety shower and eye wash should be available in the immediate work area. If clothing becomes contaminated with dust or wet cement, remove immediately and launder before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance (physical state, color, etc.):** Tan granular solid

**Odor:** No odor

<b>Odor threshold:</b> Not applicable	<b>pH:</b> Not available
<b>Melting Point/Freezing Point:</b> - Not available	<b>Boiling Point:</b> 4000°F / 2204°C
<b>Flash point:</b> Not flammable	<b>Evaporation rate:</b> Not applicable
<b>Flammability (solid, gas):</b> Not flammable or combustible	

<b>Flammable limits: LEL:</b> Not applicable	<b>UEL:</b> Not applicable
<b>Vapor pressure:</b> Not applicable	<b>Vapor density:</b> Not applicable
<b>Relative density:</b> >1	<b>Solubility(is):</b> Insoluble
<b>Partition coefficient: n-Octanol/water:</b> Not applicable	<b>Auto-ignition temperature:</b> Not applicable
<b>Decomposition temperature:</b> Not available	<b>Viscosity:</b> Not applicable

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not reactive under normal conditions of use.

**Chemical stability:** Stable.

**Possibility of hazardous reactions:** Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride.

**Conditions to avoid:** Unintentional contact with water will result in hydration and produce caustic calcium hydroxide.

**Incompatible materials:** Avoid contact with hydrofluoric acid and oxidizing agents.

**Hazardous decomposition products:** None known.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation:** Inhalation of dust may cause irritation to the nose, throat and upper respiratory tract with coughing and shortness of breath.

**Ingestion:** Large amounts may cause gastrointestinal irritation or burns with nausea and diarrhea.

**Skin contact:** Contact with dry powder may cause drying of the skin and mild irritation. May cause mechanical irritation. Contact with wet cement may cause irritation with thickening, cracking and fissuring of the skin. Prolonged contact may cause skin burns. May cause allergic skin reaction.

**Eye contact:** Dust may cause irritation or redness with inflammation of the cornea. May cause mechanical irritation. Direct contact with wet cement or large amounts of dry powder may cause irritation or burns with possible blindness.

**Chronic effects from short- and long-term exposure:** Chronic inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

**Reproductive Toxicity:** None of the components greater than 0.1% have been shown to cause reproductive or developmental toxicity.

**Sensitization:** Portland cement may contain trace amounts of chromium salts or nickel compounds that have been shown to cause sensitization in humans.

**Mutagenicity:** None of the components greater than 0.1% have been shown to cause germ cell mutagenicity.

**Carcinogenicity:** Crystalline silica quartz is listed as "Carcinogenic to Humans" (Group 1) by IARC and "Known to be a Human Carcinogen" by NTP. None of the other components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

**Acute Toxicity Values:**

Portland Cement: No toxicity data available

Crystalline Silica, Quartz: Oral rat LD50 &gt;22,500 mg/kg

Calcium Sulfate: Oral rat LD50 &gt;1581 mg/kg; Inhalation rat LC50 &gt; 2.61 mg/L/4 hr

Iron Oxide: Oral rat LD50 &gt; 10000 mg/kg;

Calcium Carbonate: No toxicity data available

Magnesium Oxide: No toxicity data available

Calcium Oxide: Oral rat LD50 &gt; 2000 mg/kg

Calcium Hydroxide: Oral rat LD50 &gt; 2000 mg/kg; Dermal rabbit LD50 &gt; 2500 mg/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Portland Cement: No toxicity data available

Iron Oxide: 96 hr LC50 Brachydanio rerio 100000 mg/L; 48 hr EC50 daphnia magna &gt;100 mg/L

Calcium Carbonate: No data available

Magnesium Oxide: No data available

Calcium Oxide: 96 hr LC50 Oncorhynchus mykiss 50.6 mg/L; 48 hr EC50 daphnia magna 49.1 mg/L; 72 hr

EC50 Pseudokirchnerella subcapitata 184.57 mg/L

Crystalline Silica: 72 hr LC50 carp &gt;10,000 mg/L

Calcium Hydroxide: 96 hr LC50 Gasterosteus aculeatus 457 mg/L; 48 hr EC50 daphnia magna 49.1 mg/L; 72 hr

EC50 Pseudokirchnerella subcapitata 184.57 mg/L

**Persistence and degradability:** Biodegradation is not applicable to inorganic substances.**Bioaccumulative potential:** Not expected to be bioaccumulative.**Mobility in soil:** No data available.**Other adverse effects:** None known.**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all local, state and federal regulations.

**14. TRANSPORT INFORMATION**

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	None	Not Regulated	None	None	None
<b>TDG</b>	None	Not Regulated	None	None	None
<b>IMDG</b>	None	Not Regulated	None	None	None
<b>IATA</b>	None	Not Regulated	None	None	None

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:** None known

## 15. REGULATORY INFORMATION

**CERCLA:** This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Acute Health, Chronic Health

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):** None

### California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): Crystalline silica, quartz (14808-60-7) 0-95% cancer, Titanium dioxide (13463-67-7) <0.08% (cancer)

**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

### CANADA:

**Canadian WHMIS Classification:** Class D Division 2A, Class D Division 2B

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

## 16. OTHER INFORMATION

**NFPA Rating:** Health = 3    Flammability = 0    Instability = 0

**HMIS Rating:** Health = 3\*    Flammability = 0    Physical Hazard = 0

**SDS Revision History:** All sections revised – Converted to GHS forma

**Date of preparation:** January 13, 2014

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.

**Poly-Crete Hardener: MD, SL, HF, TF PLUS, TF PLUS Cove,  
WR and NATURAL SL  
SAFETY DATA SHEET**

**1. IDENTIFICATION**

**Product Identifier:** Poly-Crete Hardener: MD, SL, HF, TF PLUS, TF PLUS Cove, WR and NATURAL SL  
**Product Code:**

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** January 9, 2014

**2. HAZARD(S) IDENTIFICATION**

This product is one part of a 3 part product. Read and understand the hazard information on the SDS for Poly-Crete Resin before using this product.

**Classification:**

<b>Physical</b>	<b>Health</b>
Not Hazardous	Acute Toxicity Category 4 – Inhalation Eye Irritation Category 2 Skin Irritation Category 2 Skin Sensitization Category 1 Respiratory Sensitization Category 1 Specific Target Organ Toxicity – Single Exposure Category 3 (Respiratory Irritation) Specific Target Organ Toxicity – Repeat Exposure Category 2

**Labeling:**

**Danger!**





**Hazard statement(s)**

Harmful if inhaled.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause respiratory irritation.  
 May cause damage to lungs through prolonged or repeated inhalation exposure.

**Precautionary statement(s)**

Do not breathe mist, vapors or spray.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Wash thoroughly after handling.  
 Wear protective gloves, eye protection and face protection.  
 In case of inadequate ventilation wear respiratory protection.  
 IF ON SKIN: Wash with plenty of soap and water.  
 If skin irritation or rash occurs: Get medical attention.  
 Take off contaminated clothing and wash it before reuse.  
 IF IN EYES: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical attention.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER if you feel unwell.  
 Get medical attention if you feel unwell.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Dispose of contents and container in accordance with local and national regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Concentration
4,4'-Diphenylmethane diisocyanate	101-68-8	40-60%
Polyisocyanate based on MDI	Proprietary	40-60%

**The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.**

**4. FIRST-AID MEASURES**

**Inhalation:** Immediately remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention. Asthma-like symptoms may develop immediately or delayed up to several hours.

**Skin contact:** Immediately remove contaminated clothing. Wash skin thoroughly with soap and water. If rash or irritation develops, get medical attention. Launder clothing before re-use.

**Eye contact:** Immediately flush with large quantities of water for 15 minutes, holding the eyelids apart. Get medical attention if irritation develops.

**Ingestion:** If conscious, rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. DO NOT INDUCE VOMITING. Get medical attention.

**Most important symptoms/effects, acute and delayed:** Irritating to eyes, skin and respiratory system. May cause allergic skin and respiratory reaction. If an allergic respiratory reaction occurs, get immediate medical

attention. Symptoms may be delayed. Individuals sensitized to isocyanates may have a life-threatening allergic reaction.

**Indication of immediate medical attention and special treatment, if necessary:** If skin or respiratory sensitization occurs, get immediate medical attention. Symptoms may be delayed for several hours after exposure. Respiratory sensitization may be life threatening.

## 5. FIRE-FIGHTING MEASURES

**Suitable (and unsuitable) extinguishing media:** Use foam, carbon dioxide and dry chemical. Cool fire exposed containers with water.

**Specific hazards arising from the chemical:** This product reacts with water producing heat and gases. Reaction may be violent. Closed containers may rupture when exposed to extreme heat or contaminated with water. Combustion may produce isocyanate vapors and other irritating, highly toxic gases. Exposure to heated diisocyanates can be extremely dangerous.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Do not allow run-off from fire fighting to enter drains or water courses. Decontaminate equipment and protective clothing before reuse.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Wear appropriate protective clothing as described in Section 8. Isolate the area and prevent access. Ventilate and remove ignition sources.

**Methods and materials for containment and cleaning up:** Contain and collect with an inert absorbent. Neutralize with a decontamination solution made up of 90% water and 10% concentrated ammonia and 2% detergent. Use a 10 to 1 ratio. Wait 15 minutes. Collect into a suitable container. Repeat until the surface is completely decontaminated. Cover loosely with lid and allow container to vent for 48 hours to allow carbon dioxide to escape.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Do not breathe vapors or mists. Use only with adequate ventilation. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties are not adequate to prevent overexposure from inhalation. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating.

**Conditions for safe storage, including any incompatibilities:** Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Protect from physical damage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure guidelines:

4,4'-Diphenylmethane diisocyanate	00.005 ppm TWA ACGIH TLV 0.02 ppm Ceiling OSHA PEL
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Polyisocyanate based on MDI	None Established
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**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Personal Protective Equipment:**

**Respiratory protection:** If the exposure limits are exceeded or if exposure levels are unknown, a NIOSH approved positive pressure air supplied respirator with a full facepiece or air supplied hood should be used. In some situations where exposure levels are known to be below 10 times the exposure limit an air purifying respirator (organic vapor with particulate prefilter) can be used. A change schedule for cartridges is required. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

**Skin protection:** Wear impervious gloves such as neoprene or butyl rubber.

**Eye protection:** Chemical safety goggles recommended.

**Other:** Impervious clothing as needed to prevent contact. A safety shower and eye wash should be available in the immediate work area.

**Medical Surveillance:** A pre-placement physical should be given to all employees that will work with isocyanates. Employees with a prior isocyanate sensitization should be excluded from working with this product. A history of adult asthma, eczema and respiratory allergies are possible reasons for excluding or restricting the employee from working with this product. A comprehensive annual medical surveillance program should be instituted for all employees who work with isocyanates. Once a worker has been diagnosed as sensitized, no further exposure can be permitted.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance (physical state, color, etc.):** Dark amber liquid

**Odor:** Faint aromatic odor

<b>Odor threshold:</b> 0.384 (MDI)	<b>pH:</b> Not applicable
<b>Melting Point/Freezing Point:</b> Not available	<b>Boiling Point:</b> 392°F / 200°C
<b>Flash point:</b> >392 °F / >200°C	<b>Evaporation rate:</b> Not available
<b>Flammability (solid, gas):</b> Not flammable	
<b>Flammable limits: LEL:</b> Not applicable	<b>UEL:</b> Not applicable
<b>Vapor pressure:</b> 0.00001 mmHg @25°C	<b>Vapor density:</b> 8.5
<b>Relative density:</b> 1.24	<b>Solubility(is):</b> Reacts in Water
<b>Partition coefficient: n-Octanol/water:</b> Not available	<b>Auto-ignition temperature:</b> Not available
<b>Decomposition temperature:</b> Not available	<b>Viscosity:</b> 35 mPas@25°C

## 10. STABILITY AND REACTIVITY

**Reactivity:** None known.

**Chemical stability:** Stable

**Possibility of hazardous reactions:** Contact with water or temperature greater than 400°F may cause polymerization.

**Conditions to avoid:** Avoid contact with heat, sparks and flames. Protect from freezing.

**Incompatible materials:** Avoid contact with water, alcohols, amines, acids and strong bases. May damage plastics and rubber.

**Hazardous decomposition products:** Thermal decomposition may produce carbon and nitrogen oxides, hydrogen cyanide and aromatic isocyanates.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation:** Inhalation of vapors or mists may cause mucous membrane and respiratory irritation. 4,4'-Diphenylmethane diisocyanate has been shown to cause respiratory sensitization. Symptoms include dryness of the throat, tightness of chest and difficulty in breathing. Symptoms may be delayed for several hours after exposure. This product can produce asthmatic sensitization upon a single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. The allergic respiratory reaction may be life threatening.

**Ingestion:** Swallowing may cause gastrointestinal irritation abdominal pain, nausea, vomiting and diarrhea.

**Skin contact:** Skin contact may cause irritation with redness, itching and swelling. May cause allergic skin reaction. 4,4'-Diphenylmethane diisocyanate has been shown to be irritating to rabbit skin. Animal tests have indicated that respiratory sensitization can result from skin contact with isocyanates.

**Eye contact:** May cause irritation with redness, tearing, stinging and swelling. 4,4'-Diphenylmethane diisocyanate has been shown to cause irritation to rabbit eyes.

**Chronic effects from short- and long-term exposure:** Prolonged exposure to 4,4'-diphenylmethane diisocyanate may cause chronic irritation, decreased lung function and lung damage and conjunctivitis. 4,4'-Diphenylmethane has been shown to cause damage to the olfactory epithelium after repeated inhalation in a repeat dose study in rats.

**Reproductive Toxicity:** 4,4'-Diphenylmethane diisocyanate has been shown to cause developmental toxicity only at doses that were maternally toxic.

**Sensitization:** 4,4'-Diphenylmethane diisocyanate has been shown to cause sensitization in a skin sensitization study with guinea pigs.

**Mutagenicity:** 4,4'-Diphenylmethane diisocyanate was negative the in the AMES test (with/without metabolic activation) and in an in vivo micronucleus assay.

**Carcinogenicity:** None of the other components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

### Acute Toxicity Values:

4,4'-Diphenylmethane diisocyanate: Oral rat LD50 >2,000 mg/kg; Inhalation rat LC10 > 2.24 mg/L/1 hr;

Dermal rabbit LD50 >9,400 mg/kg.

Polyisocyanate based on MDI: No acute toxicity data available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

4,4'-Diphenylmethane diisocyanate: 96 hr LC50 *Oryzias latipes* > 3000 mg/L; 48 hr EC50 *daphnia magna* 129.7 mg/L; 72 hr EC50 *Desmodesmus subspicatus* > 1640 mg/L (structurally similar chemical)

Polyisocyanate based on MDI: No data available

**Persistence and degradability:** 4,4'-Diphenylmethane diisocyanate is not readily biodegradable.

**Bioaccumulative potential:** 4,4'-Diphenylmethane diisocyanate has a calculated BCF of 200.

**Mobility in soil:** No data available.

**Other adverse effects:** None known.

### 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations. Incineration is the preferred method.

### 14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	None	Not Regulated	None	None	None
<b>TDG</b>	None	Not Regulated	None	None	None
<b>IMDG</b>	None	Not Regulated	None	None	None
<b>IATA</b>	None	Not Regulated	None	None	None

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:**

### 15. REGULATORY INFORMATION

**CERCLA:** This product has a Reportable Quantity (RQ) of 10,000 lbs. based on the RQ for 4,4'-Diphenylmethane diisocyanate of 5,000 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under applicable federal, state and local regulations.

**SARA Hazard Category (311/312):** Acute Health, Chronic Health

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):** Diisocyanates 100%

#### California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): None

**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

#### CANADA:

**Canadian CEPA:** All of the ingredients in this product are listed on the Canadian DSL.

**Canadian WHMIS Classification:** Class D Division 2 Subdivision A (Very Toxic Material Causing other Toxic Effects), Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

### 16. OTHER INFORMATION

**NFPA Rating:** Health = 2    Flammability = 1    Instability = 1

**HMIS Rating:** Health = 2\*    Flammability = 1    Physical Hazard = 1

**SDS Revision History:** Converted to GHS format. All sections revised.

**Date of preparation:** January 9, 2014

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.

**Poly-Crete HF, MD, SL, TF PLUS, TF PLUS COVE,  
WR & NATURAL SL Resin  
SAFETY DATA SHEET**

**1. IDENTIFICATION**

**Product Identifier:** Poly-Crete HF, MD, SL, TF PLUS, TF PLUS COVE, WR & NATURAL SL Resin  
**Product Code:**

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** January 30, 2014

**2. HAZARD(S) IDENTIFICATION**

This product is one part of a 3 part product. Read and understand the hazard information on the SDS for Poly-Crete Hardener and Poly-Crete Aggregate before using this product.

**Classification:**

<b>Physical</b>	<b>Health</b>
Not Hazardous	Specific Target Organ Toxicity – Repeat Exposure Category 2

**Labeling:**

**Warning!**



**Hazard statement(s)**

May cause damage to kidneys through prolonged or repeated exposure.

**Precautionary statement(s)**

Do not breathe mist, vapors or spray.  
Get medical attention if you feel unwell.  
Dispose of contents and container in accordance with local and national regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Concentration
Polyester-Ether Polyol Blend	Mixture	1-15%
Diethylene Glycol	111-46-6	1-5%
Titanium Dioxide	13463-67-7	1-5%
Carbon Black	1333-86-4	<1%

**The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.**

**4. FIRST-AID MEASURES**

**Inhalation:** Remove victim to fresh air. If irritation occurs or breathing is difficult, get medical attention.

**Skin contact:** Wash with soap and water. If irritation develops and persists, get medical attention.

**Eye contact:** Flush with large quantities of water, holding the eyelids apart. Get medical attention if irritation persists.

**Ingestion:** If conscious, rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

**Most important symptoms/effects, acute and delayed:** Prolonged overexposure to diethylene glycol may cause kidney damage.

**Indication of immediate medical attention and special treatment, if necessary:** None expected under normal conditions of use. If large amounts are swallowed, get medical attention.

**5. FIRE-FIGHTING MEASURES**

**Suitable (and unsuitable) extinguishing media:** Use water spray, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water.

**Specific hazards arising from the chemical:** Combustion may produce carbon oxides.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment, and emergency procedures:** Wear appropriate protective clothing as described in Section 8.

**Environmental precautions:** Avoid release to the environment. Report releases as required by local, state and federal authorities.

**Methods and materials for containment and cleaning up:** Contain and collect with an inert absorbent. Place into an appropriate container for disposal. Caution slip hazard. Wash spill site with soap and water.



**7. HANDLING AND STORAGE**

**Precautions for safe handling:** Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet. Use with adequate ventilation.

**Conditions for safe storage, including any incompatibilities:** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from physical damage. Store away from oxidizing agents.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure guidelines:**

Polyol Blend	None Established
Diethylene Glycol	10 mg/m <sup>3</sup> TWA AIHA WEEL
Titanium Dioxide	15 mg/m <sup>3</sup> TWA OSHA PEL (total dust) 10 mg/m <sup>3</sup> TWA ACGIH TLV
Carbon Black	3.5 mg/m <sup>3</sup> TWA OSHA PEL 3 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable)

**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below occupational exposure limits.

**Personal Protective Equipment:**

**Respiratory protection:** If the exposures are excessive, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

**Skin protection:** Wear impervious gloves such as nitrile or butyl rubber.

**Eye protection:** Chemical safety goggles recommended.

**Other:** Impervious clothing as needed to prevent contact. An eye wash should be available in the immediate work area.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance (physical state, color, etc.):** Colored, viscous liquid

**Odor:** Faint aromatic odor

<b>Odor threshold:</b> Not available	<b>pH:</b> Not available
<b>Melting Point/Freezing Point:</b> - Not available	<b>Boiling Point:</b> 212°F / 100°C
<b>Flash point:</b> 540 °F / 282.2°C	<b>Evaporation rate:</b> <1 (butyl acetate = 1)
<b>Flammability (solid, gas):</b> Not applicable	
<b>Flammable limits: LEL:</b> Not applicable	<b>UEL:</b> Not applicable
<b>Vapor pressure:</b> Not available	<b>Vapor density:</b> >1
<b>Relative density:</b> >1	<b>Solubility:</b> Dispersible in water
<b>Partition coefficient: n-Octanol/water:</b> Not available	<b>Auto-ignition temperature:</b> Not available
<b>Decomposition temperature:</b> Not available	<b>Viscosity:</b> Not available

## 10. STABILITY AND REACTIVITY

**Reactivity:** None known.

**Chemical stability:** Stable

**Possibility of hazardous reactions:** None known.

**Conditions to avoid:** Avoid excessive heat.

**Incompatible materials:** Avoid contact with oxidizing agents.

**Hazardous decomposition products:** Thermal decomposition may produce carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation:** Excessive inhalation of mists may cause mucous membrane and upper respiratory tract irritation.

**Ingestion:** Swallowing may cause gastrointestinal irritation, nausea and diarrhea.

**Skin contact:** Prolonged skin contact may cause irritation.

**Eye contact:** May cause irritation with redness and tearing.

**Chronic effects from short- and long-term exposure:** Prolonged overexposure to diethylene glycol has been shown to cause kidney damage in animal studies.

**Reproductive Toxicity:** This product is not expected to cause adverse reproductive or developmental effects.

**Sensitization:** None of the components have been shown to cause sensitization in humans or animals. .

**Mutagenicity:** This product is not expected to cause mutagenic activity.

**Carcinogenicity:** Carbon black is listed as "Possibly Carcinogenic to Humans" (Group 2B) by IARC. Carbon black is inextricably bound in a polymer matrix and no exposure occurs during use.

### Acute Toxicity Values:

Polyol Blend: No toxicity data available.

Diethylene glycol: Oral rat LD50 12,565 mg/kg; Dermal rabbit LD50 11,890 mg/kg

Titanium Dioxide: Oral rat LD50 >5000 mg/kg; Inhalation rat LC50 > 6.82 mg/L /4 hr

Carbon Black: Oral rat LD50 >8000 mg/kg; Inhalation rat LC50 > 4.6 mg/m<sup>3</sup>/4 hr

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

Polyol Blend: No data available

Diethylene glycol: 96 hr LC50 *Lepomis macrochirus* 1000 mg/L;

Titanium Dioxide: 72 hr EC50 *Pseudokirchnerella subcapitata* 61 mg/L

Carbon Black: 96 hr *Danio rerio* LC0 1000 mg/L; 24 hr EC50 *daphnia magna* >5600 mg/L; 72 hr EC50 >10000 mg/L

**Persistence and degradability:** Biodegradation is not applicable to inorganic substances such as carbon black and titanium dioxide. Diethylene glycol is readily biodegradable.

**Bioaccumulative potential:** Diethylene glycol has a BCF of 3. .

**Mobility in soil:** Diethylene glycol has a high mobility in soil.

**Other adverse effects:** None known.

**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all local, state and federal regulations.

**14. TRANSPORT INFORMATION**

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	None	Not Regulated	None	None	None
<b>TDG</b>	None	Not Regulated	None	None	None
<b>IMDG</b>	None	Not Regulated	None	None	None
<b>IATA</b>	None	Not Regulated	None	None	None

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:**

**15. REGULATORY INFORMATION**

**CERCLA:** This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Acute Health

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):** None

**California Proposition 65**

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): Toluene 108-88-3 (developmental, female reproductive toxicity) <1 ppm, Benzene (71-43-2) (cancer, developmental, male reproductive toxicity) <1 ppm, Ethylbenzene (100-41-4) (cancer) <1 ppm (carbon black, crystalline silica and titanium dioxide are inextricably bound).

**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

**CANADA:**

**Canadian WHMIS Classification:** Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

**16. OTHER INFORMATION**

**NFPA Rating:** Health = 1      Flammability = 1      Instability = 0  
**HMIS Rating:** Health = 1      Flammability = 1      Physical Hazard = 0

**SDS Revision History:** Converted to GHS format. All sections revised

**Date of preparation:** January 30, 2014

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.

**Flintshot, Qrok, 290 Flour, ¼ NJ, ½ NJ, F-70,  
Q11, Q28, Q40, Vistaquartz  
SAFETY DATA SHEET**

**1. IDENTIFICATION**

**Product Identifier:** Flintshot, Qrok, 290 Flour ¼ NJ, ½ NJ, F-70, Q11, Q28, Q40, Vista-Quartz

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** January 7, 2015

**2. HAZARD(S) IDENTIFICATION**

**Classification:**

Physical	Health
Not Hazardous	Carcinogenicity Category 1A Specific Target Organ Toxicity – Repeat Exposure Category 1

**Labeling:**

**Danger!**



**Hazard statement(s)**

May cause cancer by inhalation.  
Causes damage to lungs through prolonged or repeated inhalation exposure.

**Precautionary statement(s)**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use personal protective equipment as required.  
IF exposed or concerned: Get medical attention.  
Dispose of contents and container in accordance with local and national regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Crystalline Silica	14808-60-7	90-100%
Titanium Dioxide	13463-67-7	0-5%

### 4. FIRST-AID MEASURES

**Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial ventilation. Get medical attention if irritation persists.

**Skin contact:** Remove contaminated clothing and launder before reuse. Wash skin with soap and water. Get medical attention if irritation develops or persists.

**Eye contact:** Immediately flush eyes with large quantities of water for several minutes, holding the eyelids apart. Get medical attention if irritation persists.

**Ingestion:** If swallowed, rinse mouth with water.

**Most important symptoms/effects, acute and delayed:** Dust may cause mechanical eye and skin irritation. Inhalation of dust may cause respiratory irritation, coughing and difficulty in breathing. Prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis) and increase the risk of lung cancer. Risk of cancer depends on duration and level of exposure

**Indication of immediate medical attention and special treatment, if necessary:** None required under normal conditions of use.

### 5. FIRE-FIGHTING MEASURES

**Suitable (and unsuitable) extinguishing media:** Use media appropriate to the surrounding fire.

**Specific hazards arising from the chemical:** Not flammable or combustible. Dry powders may accumulate static charge in handling which can be a source of ignition for flammable atmospheres.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Wear appropriate protective clothing as described in Section 8.

**Environmental precautions:** Report releases as required by local and federal authorities.

**Methods and materials for containment and cleaning up:** Collect using dustless method and place in appropriate container for use or disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling:** Avoid contact with eyes, skin and clothing. Do not breathe dust. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation and proper dust collection methods to keep exposure level below occupational exposure limits. Wash thoroughly with soap and water after use.

Dust can accumulate electrostatic charges due to friction from transfer and mixing operations and cause an electrical spark (ignition source) which can ignite flammable liquids and atmospheres. Provide adequate precautions when adding this product to flammable and combustible mixtures like paints and coating, such as electrical grounding and bonding, inert atmosphere or non-sparking tools. However, bonding and grounds may not eliminate the hazard for static accumulation.

Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated area. Protect from physical damage.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure guidelines:**

Crystalline Silica	<u>10 mg/m<sup>3</sup></u>	TWA OSHA PEL (respirable fraction)
	% Silica + 2	
	<u>30 mg/m<sup>3</sup></u>	TWA OSHA PEL (total dust)
	% Silica + 2	
	0.025 mg/m <sup>3</sup>	TWA ACGIH TLV (respirable fraction)
Titanium Dioxide	15 mg/m <sup>3</sup>	TWA OSHA PEL (total dust)
	10 mg/m <sup>3</sup>	TWA ACGIH TLV

**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Individual protection measures, such as personal protective equipment:**

**Respiratory protection:** If the exposure limits are exceeded a NIOSH approved particulate respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.

**Skin protection:** Abrasive resistant gloves are recommended to prevent skin contact.

**Eye protection:** Chemical safety glasses with sideshields are recommended to prevent eye contact.

**Other:** None required.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance (physical state, color, etc.):** White or tan granular powder

**Odor:** No odor

<b>Odor threshold:</b> Not available	<b>pH:</b> Not applicable
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<b>Melting Point/Freezing Point:</b> 3110°F / 1710°C	<b>Boiling Point:</b> 4046°F/2230°C
<b>Flash point:</b> Not flammable	<b>Evaporation rate:</b> Not applicable
<b>Flammability (solid, gas):</b> Not flammable or combustible	
<b>Flammable limits: LEL:</b> Not applicable	<b>UEL:</b> Not applicable
<b>Vapor pressure:</b> Not applicable	<b>Vapor density:</b> Not applicable
<b>Relative density:</b> 2.65	<b>Solubility(is):</b> Insoluble in water
<b>Partition coefficient: n-Octanol/water:</b> Not applicable	<b>Auto-ignition temperature:</b> Not applicable
<b>Decomposition temperature:</b> Not available	<b>Viscosity:</b> Not applicable

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not reactive under normal conditions of use.

**Chemical stability:** Stable

**Possibility of hazardous reactions:** Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride.

**Conditions to avoid:** None known.

**Incompatible materials:** Avoid contact with oxidizing agents.

**Hazardous decomposition products:** None known.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation:** Inhalation of dust may cause irritation to the nose, throat and upper respiratory tract with coughing and shortness of breath.

**Ingestion:** Not expected to cause adverse effects.

**Skin contact:** Prolonged skin contact may cause mechanical irritation and abrasions.

**Eye contact:** Dust may cause irritation or redness with inflammation of the cornea. May cause mechanical irritation.

**Chronic effects from short- and long-term exposure:** Chronic inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

**Reproductive Toxicity:** None of the components have been shown to cause reproductive or developmental toxicity.

**Sensitization:** None of the components have been shown to cause sensitization in animals or humans.

**Mutagenicity:** None of the components have been shown to cause mutagenic activity.

**Carcinogenicity:** Crystalline silica quartz is listed as “Carcinogenic to Humans” (Group 1) by IARC, as a “Known to be a Human Carcinogen” by NTP and “Suspected Human Carcinogen, A2 by ACGIH. Titanium dioxide is listed by IARC as “Possibly Carcinogenic to Humans”, Group 2B. None of the other components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA.

### Acute Toxicity Values:

Crystalline Silica, Quartz: Oral rat LD50 >22,500 mg/kg

Titanium Dioxide: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >6.82 mg/L/4 hr



**12. ECOLOGICAL INFORMATION**

**Ecotoxicity:**

Crystalline Silica, Quartz: No data available

Titanium Dioxide: 96 hr LC50 Pimephales promelas >1000 mg/L, 48 hr EC50 daphnia magna >1000 mg/L, 72

hr EC50 Pseudokirchneriella subcapitata 61 mg/L

**Persistence and degradability:** Biodegradation is not applicable to inorganic substances.

**Bioaccumulative potential:** Not expected to be bioaccumulative.

**Mobility in soil:** No data available.

**Other adverse effects:** None known.

**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all local, state and federal regulations.

**14. TRANSPORT INFORMATION**

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	None	Not Regulated	None	None	None
<b>TDG</b>	None	Not Regulated	None	None	None
<b>IMDG</b>	None	Not Regulated	None	None	None
<b>IATA</b>	None	Not Regulated	None	None	None

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:** None known

**15. REGULATORY INFORMATION**

**CERCLA:** This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Chronic Health

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):** None

**California Proposition 65**

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects):

Crystalline silica, quartz	14808-60-7	90-100%	cancer
Titanium Dioxide	13463-67-7	0-5%	cancer

**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

**CANADA:**

**Canadian WHMIS Classification:** Class D Division 2A (Very toxic material causing other toxic effects)

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

<b>16. OTHER INFORMATION</b>
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**NFPA Rating:** Health = 0    Flammability = 0    Instability = 0  
**HMIS Rating:** Health = 0\*    Flammability = 0    Physical Hazard = 0

**SDS Revision History:** All sections revised – Converted to GHS format

**Date of preparation:** January 7, 2015

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.

## Cryl-A-Glaze G201 & G202 SAFETY DATA SHEET

**1. IDENTIFICATION**

**Product Identifier:** Cryl-A-Glaze G201, Cryl-A-Glaze G202

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** July 13, 2014

**2. HAZARD(S) IDENTIFICATION**

**Classification:**

<b>Physical</b>	<b>Health</b>
Flammable Liquid Category 2	Skin Irritation Category 2 Skin Sensitization Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (Respiratory Irritation) Specific Target Organ Toxicity Repeat Exposure Category 2 Carcinogen Category 2

**Labeling:**

**Danger!**



**Hazard statement(s)**

Highly flammable liquid and vapor.  
Causes skin irritation  
May cause an allergic skin reaction  
May cause respiratory irritation.  
May cause damage to kidneys through prolonged or repeated exposure.  
Suspected of causing cancer.

**Precautionary statement(s)**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames, and hot surfaces.  
No smoking.  
Keep container tightly closed.  
Ground and bond container and receiving equipment  
Use explosion-proof electrical, ventilating and lighting equipment.

Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe mist, vapors or spray.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves, eye protection and face protection.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical attention.  
Wash contaminated clothing before reuse.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor if you feel unwell.  
IF exposed or concerned: Get medical attention.  
In case of fire: Use water spray, carbon dioxide and foam to extinguish.  
Store in a well-ventilated place. Keep cool. Keep container tightly closed.  
Store locked up.  
Dispose of contents and container in accordance with local and national regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Methyl Methacrylate	80-62-6	40-60%
Acrylic Copolymer Resin	Proprietary	20-40%
Dibutyl Maleate	105-76-0	10-20%
Triethylene Glycol Dimethacrylate	109-16-0	1-5%
N,N-Dimethyl-p-toluidine	99-97-8	0.1-1%

**The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.**

### 4. FIRST-AID MEASURES

**Inhalation:** Remove victim to fresh air. If breathing is difficult, have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

**Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation or other symptoms develop, get medical attention. Launder clothing before re-use.

**Eye contact:** Flush with large quantities of water for several minutes, holding the eyelids apart. Get medical attention if irritation persists.

**Ingestion:** If conscious, rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

**Most important symptoms/effects, acute and delayed:** May cause respiratory tract, eye and skin irritation. Prolonged or repeated contact may cause allergic skin reaction (skin sensitization). Prolonged overexposure may cause kidney damage. May cause cancer based on animals data.

**Indication of immediate medical attention and special treatment, if necessary:** If skin irritation or sensitization occurs, discontinue use and get medical attention.

## 5. FIRE-FIGHTING MEASURES

**Suitable (and unsuitable) extinguishing media:** Use water spray, carbon dioxide or dry chemical. Cool fire exposed containers with water.

**Specific hazards arising from the chemical:** Vapors are heavier than air and may travel to ignition source and flash back. Heat of fire may cause an exothermic auto polymerization reaction. Emits toxic fumes under fire conditions. Closed containers may explode due to pressure build up when exposed to extreme heat.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Provide explosion-proof ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapors. Wear appropriate protective clothing as described in Section 8. Eliminate all ignition sources.

**Environmental precautions:** Avoid release to the environment. Report releases as required by local, state and federal authorities.

**Methods and materials for containment and cleaning up:** Contain and collect with an inert absorbent. Place into an appropriate container for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Ground container when pouring. Keep away from heat, sparks, flames and all sources of ignition. Do not expose to direct sunlight. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated area. Keep container tightly closed when not in use. Do not store in direct sunlight. Prevent moisture contact. Protect from physical damage. Keep away from oxidizers and other incompatible materials.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure guidelines:

Methyl Methacrylate	100 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV 100 ppm ACGIH TLV STEL
Acrylic Copolymer Resin	None Established
Dibutyl Maleate	None Established
Triethylene Glycol Dimethacrylate	None Established

N,N-Dimethyl-p-toluidine	0.5 ppm TWA AIHA WEEL
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**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below occupational exposure limits. Use explosion-proof equipment where required.

**Personal Protective Equipment:**

**Respiratory protection:** None required with adequate ventilation. An approved air-purifying respirator with an organic vapor cartridge may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Selection and use of respiratory equipment must be in accordance with appropriate regulations and good industrial hygiene practice.

**Skin protection:** Wear impervious gloves such as nitrile rubber or other impervious gloves.

**Eye protection:** Wear safety chemical goggles when the possibility exists for eye contact due to splashing or spraying material.

**Other:** Wear impervious clothing if needed to prevent any contact with this product, such as gloves, apron, boots, or whole body suit.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance (physical state, color, etc.):** Moderately turbid fluid with a sweet ester odor

**Odor:** Sweet ester odor

<b>Odor threshold:</b> Not available	<b>pH:</b> Not available
<b>Melting Point/Freezing Point:</b> Not available	<b>Boiling Point:</b> 212°F / 100°C
<b>Flash point:</b> 50 °F / 10°C (Setaflash)	<b>Evaporation rate:</b> >1 (butyl acetate = 1)
<b>Flammability (solid, gas):</b> Not applicable	
<b>Flammable limits: LEL:</b> 2.1% (Methyl Methacrylate)	<b>UEL:</b> 12.5% (Methyl Methacrylate)
<b>Vapor pressure:</b> 35 mmHg @ 20°C (Methyl Methacrylate)	<b>Vapor density:</b> >1
<b>Relative density:</b> ~1	<b>Solubility(is):</b> 16 g/L (in water)
<b>Partition coefficient: n-Octanol/water:</b> Not applicable	<b>Auto-ignition temperature:</b> >500°F / 260°C (Methyl Methacrylate)
<b>Decomposition temperature:</b> Not available	<b>Viscosity:</b> Not available

**10. STABILITY AND REACTIVITY**

**Reactivity:** Polymerization can occur.

**Chemical stability:** Stable when stabilized. The product is unstable at elevated temperatures and pressures.

**Possibility of hazardous reactions:** Methyl methacrylate can undergo hazardous polymerization if exposed to excessive heat, peroxides and polymerization catalysts.

**Conditions to avoid:** Avoid heat, sparks and open flames.

**Incompatible materials:** Avoid contact with oxidizing agents, reducing agents, peroxides and polymerization catalysts.

**Hazardous decomposition products:** Thermal decomposition may produce carbon oxides, toxic fumes and hydrocarbons.

**11. TOXICOLOGICAL INFORMATION**

**Inhalation:** May cause respiratory tract irritation with coughing, mucous production and shortness of breath. Methyl methacrylate has been shown to cause irritation of the upper respiratory tract in studies with laboratory animals.

**Ingestion:** Swallowing may cause gastrointestinal irritation, nausea and diarrhea.

**Skin contact:** Causes skin irritation. Methyl methacrylate has been shown to cause severe irritation when tested undiluted on rabbit skin. Causes skin sensitization. Cases of contact dermatitis has been reported in workers exposed to methyl methacrylate.

**Eye contact:** May cause eye irritation. Methyl methacrylate has been shown to cause mild irritation to the conjunctiva in animal studies.

**Chronic effects from short- and long-term exposure:** In subchronic inhalation studies with methyl methacrylate, systemic toxic effects were seen in rats to the liver, kidney, brain, spleen and bone marrow >1000 ppm. Oral administration of methyl methacrylate to rats resulted in a NOAEL of 200 mg/kg. In a 90day oral gavage study in male and female rats, dibutyl maleate was shown to cause increase kidney weights, chronic progressive nephropathy and tubular basophilia within the renal cortex. After a 2-week recovery period the kidneys effects persisted in both sexes. LOAEL 30 mg/kg.

**Reproductive Toxicity:** This product is not expected to cause adverse reproductive or developmental effects. Methyl methacrylate did not cause reproductive effects on male fertility when animals were exposed to 9000 ppm. No teratogenicity, embryotoxicity or fetotoxicity has been observed at exposure levels up to and including 2028 ppm

**Sensitization:** Methyl methacrylate and triethylene glycol dimethylacrylate have been shown to cause sensitization in a mouse local lymphnode assays.

**Mutagenicity:** Methyl methacrylate was negative in sister chromatid exchange assay in mammalian cells and in a vivo chromosome aberration assay.

**Carcinogenicity:** None of the components are listed as a carcinogen by IARC, NTP, ACGIH or OSHA. In a 2 year NTP carcinogenicity study N,N-dimethyl-p-toluidine was administered by gavage to male and female mice and rats. Results included increased incidences of nonneoplastic lesions of the liver and nasal cavity in male and female rats and mice; the kidney in male and female rats; the spleen and bone marrow in male and female rats and female mice; the lung in male and female mice; the forestomach in male rats and female mice; the mesenteric lymph node in male rats and female mice; and the olfactory lobe in male and female mice.

**Acute Toxicity Values:** No toxicity data for the product. Acute Toxicity Estimate: Oral rat LD50 6174 mg/kg  
Methyl Methacrylate: Oral rat LD50 7800 mg/kg; Inhalation rat LC50 3750 mg/L/8 hr; Dermal rabbit LD60 >5000 mg/kg

Acrylic Copolymer Resin: No toxicity data available

Dibutyl Maleate: Oral rat LD50  $\geq$ 3730 mg/kg; Inhalation rat LC50 > 5000 mg/m<sup>3</sup>; Dermal rat LD50 > 2000 mg/kg

Triethylene Glycol Dimethacrylate: Dermal rabbit LD50 > 2000 mg/kg

N,N-Dimethyl-p-toluidine: Oral rat LD50 139 mg/kg; Inhalation rat LC50 1400 mg/m<sup>3</sup>/4 hr; Dermal rabbit LD50 > 2000 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

Methyl Methacrylate: 96 hr LC50 Pimephales promelas 130 mg/L; 24 hr LC50 daphnia magna 1760 mg/L  
 Acrylic Copolymer Resin: No data available  
 Dibutyl Maleate: 96 hr EC50 Oncorhynchus mykiss 1.2 mg/L; 48 hr EC50 daphnia magna 21 mg/L; 72 hr EC50  
 Desmodemus subspicatus 6.2 mg/L  
 Triethylene Glycol Dimethacrylate: 96 hr LC50 Danio rerio 16.4 mg/L; 72 hr EC50 Pseudokirchnerella  
 subcapitata > 100 mg/L  
 N,N-Dimethyl-p-toluidine: 96 hr LC50 Pimephales promelas 46 mg/L; 48 hr daphnia magna 15.259 mg/L; 72  
 hr EC50 Pseudokirchneriella subcapitata 24.37002 mg/L

**Persistence and degradability:** Methyl methacrylate, N,N-dimethyl-p-toluidine, dibutyl maleate and triethylene glycol dimethacrylate are readily biodegradable.

**Bioaccumulative potential:** Methyl methacrylate has a BCF of 2.97. Dibutyl maleate has a BCF of 1.91

**Mobility in soil:** Methyl methacrylate has a high mobility in soil.

**Other adverse effects:** None known.

### 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations.

### 14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
<b>TDG</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
<b>IMDG</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
<b>IATA</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:** None known

### 15. REGULATORY INFORMATION

**CERCLA:** This product has a Reportable Quantity (RQ) of 1666 lbs. (based on the RQ for Methyl Methacrylate of 1000 lbs). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Acute Health, Chronic Health, Fire Hazard, Reactive Hazard

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):**

Methyl Methacrylate

80-62-6

40-60%



**California Proposition 65**

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects):

N,N-Dimethyl-p-toluidine	99-97-8	0.1-1%	Cancer
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**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

**CANADA:**

**Canadian WHMIS Classification:** Class B-2 (Flammable Liquid) Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

<b>16. OTHER INFORMATION</b>
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**NFPA Rating:** Health = 2    Flammability = 3    Instability = 2  
**HMIS Rating:** Health = 2    Flammability = 3    Physical Hazard = 2

**SDS Revision History:** Converted to GHS format. All sections revised.

**Date of preparation:** July 17, 2014

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.

## Cryl-A-Top T301, T303 Clear, Cryl-A-Top T301, T303 Pigmented SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product Identifier:** Cryl-A-Top T301, T303 Clear, Cryl-A-Top T301, T303 Pigmented

**Recommended use:** Floor Surfacing

**Manufacturer Name:** Dur-A-Flex, Inc.  
95 Goodwin Street  
East Hartford, CT 06108

**Telephone number:** 860-528-9838

**Emergency phone number:** 1-800- 424-9300 (CHEMTREC)

**Date of Preparation:** September 8, 2014

### 2. HAZARD(S) IDENTIFICATION

**Classification:**

Physical	Health
Flammable Liquid Category 3	Skin Irritation Category 2 Skin Sensitization Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (Respiratory Irritation) Specific Target Organ Toxicity Repeat Exposure Category 2

**Labeling:**

**Danger!**



**Hazard statement(s)**

Flammable liquid and vapor.  
Causes skin irritation  
May cause an allergic skin reaction  
May cause respiratory irritation.  
May cause damage to kidneys, liver and thyroid through prolonged or repeated exposure by ingestion.

**Precautionary statement(s)**

Keep away from heat, sparks, open flames, and hot surfaces.  
No smoking.  
Keep container tightly closed.  
Ground and bond container and receiving equipment  
Use explosion-proof electrical, ventilating and lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe mist, vapors or spray.  
Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves, protective clothing and eye protection.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical attention.  
Wash contaminated clothing before reuse.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor if you feel unwell.  
Get medical attention if you feel unwell.  
In case of fire: Use water fog, carbon dioxide, foam or dry chemical to extinguish.  
Store in a well-ventilated place. Keep cool. Keep container tightly closed.  
Store locked up.  
Dispose of contents and container in accordance with local and national regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Methyl Methacrylate	80-62-6	60-80%
Acrylate/Methacrylate Polymer	Proprietary	10-20%
Triethylene Glycol Dimethacrylate	109-16-0	1-10%
2-Hydroethyl-p-Toluidine	3077-12-1	1-5%
Ethoxylated Nonyl Phenol Acrylate	Proprietary	0-10%
Titanium Dioxide*	13463-67-7	0-10%
Dibutyl Maleate	105-76-0	0-5%
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	0-5%
A mixture of branched and linear C7-C9 alkyl propionates	Proprietary	0-5%

\* The titanium dioxide in this product is inextricably bound in a manner that no exposure occurs during normal use and handling. Therefore this product is not classified as a carcinogen.

**The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.**

### 4. FIRST-AID MEASURES

**Inhalation:** Remove victim to fresh air. If breathing is difficult, have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

**Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation or other symptoms develop, get medical attention. Launder clothing before re-use.

**Eye contact:** Flush with large quantities of water for several minutes, holding the eyelids apart. Get medical attention if irritation persists.

**Ingestion:** If conscious, rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

**Most important symptoms/effects, acute and delayed:** Causes skin irritation. May cause eye and respiratory tract irritation. May cause allergic skin reaction (skin sensitization).

**Indication of immediate medical attention and special treatment, if necessary:** None required under normal conditions of use.

## 5. FIRE-FIGHTING MEASURES

**Suitable (and unsuitable) extinguishing media:** Use water fog, carbon dioxide, foam or dry chemical. Cool fire exposed containers with water.

**Specific hazards arising from the chemical:** Vapors are heavier than air and may travel to ignition source and flash back. Heat of fire may cause an exothermic auto polymerization reaction. Emits toxic fumes under fire conditions. Closed containers may explode due to pressure build up when exposed to extreme heat.

**Special protective equipment and precautions for fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Provide explosion-proof ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapors. Wear appropriate protective clothing as described in Section 8. Eliminate all ignition sources.

**Environmental precautions:** Avoid release to the environment. Report releases as required by local, state and federal authorities.

**Methods and materials for containment and cleaning up:** Contain and collect with an inert absorbent. Place into an appropriate container for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Ground container when pouring. Keep away from heat, sparks, flames and all sources of ignition. Do not expose to direct sunlight. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated area. Keep container tightly closed when not in use. Do not store in direct sunlight. Prevent moisture contact. Protect from physical damage. Keep away from oxidizers and other incompatible materials.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure guidelines:**

Methyl Methacrylate	100 ppm TWA OSHA PEL 50 ppm TWA ACGIH TLV 100 ppm ACGIH TLV STEL
Acrylate/Methacrylate Polymer	None Established
Triethylene Glycol Dimethacrylate	None Established
2-Hydroethyl-p-Toluidine	None Established
Ethoxylated Nonyl Phenol Acrylate	None Established
Titanium Dioxide	15 mg/m <sup>3</sup> TWA OSHA PEL (total dust) 10 mg/m <sup>3</sup> TWA ACGIH TLV
Dibutyl Maleate	None Established
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	None Established
A mixture of branched and linear C7-C9 alkyl propionates	None Established

**Appropriate engineering controls:** Use with adequate general or local exhaust ventilation to maintain exposures below occupational exposure limits. Use explosion-proof equipment where required.

**Personal Protective Equipment:**

**Respiratory protection:** None required with adequate ventilation. An approved air-purifying respirator with an organic vapor cartridge may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Selection and use of respiratory equipment must be in accordance with appropriate regulations and good industrial hygiene practice.

**Skin protection:** Wear impervious gloves.

**Eye protection:** Wear safety chemical goggles when the possibility exists for eye contact due to splashing or spraying material.

**Other:** Wear impervious clothing if needed to prevent any contact with this product, such as gloves, apron, boots, or whole body suit.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance (physical state, color, etc.):** Moderately turbid fluid.

**Odor:** Sweet ester odor

<b>Odor threshold:</b> Not available	<b>pH:</b> Not available
<b>Melting Point/Freezing Point:</b> Not available	<b>Boiling Point:</b> 212°F / 100°C
<b>Flash point:</b> 50 °F / 10°C (Setaflash)	<b>Evaporation rate:</b> >1 (butyl acetate = 1)
<b>Flammability (solid, gas):</b> Not applicable	
<b>Flammable limits: LEL:</b> 2.1% (Methyl Methacrylate)	<b>UEL:</b> 12.5% (Methyl Methacrylate)
<b>Vapor pressure:</b> 35 mmHg @ 20°C (Methyl Methacrylate)	<b>Vapor density:</b> >1
<b>Relative density:</b> ~1	<b>Solubility(is):</b> 16 g/L (in water)
<b>Partition coefficient: n-Octanol/water:</b> Not applicable	<b>Auto-ignition temperature:</b> >500°F / 260°C (Methyl Methacrylate)

**Decomposition temperature:** Not available

**Viscosity:** Not available

## 10. STABILITY AND REACTIVITY

**Reactivity:** Polymerization can occur.

**Chemical stability:** Stable when stabilized. The product is unstable at elevated temperatures and pressures.

**Possibility of hazardous reactions:** Methyl methacrylate can undergo hazardous polymerization if exposed to excessive heat, peroxides and polymerization catalysts.

**Conditions to avoid:** Avoid heat, sparks and open flames.

**Incompatible materials:** Avoid contact with oxidizing agents, reducing agents, peroxides and polymerization catalysts.

**Hazardous decomposition products:** Thermal decomposition may produce carbon oxides, toxic fumes and hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract irritation. Methyl methacrylate has been shown to cause respiratory in studies in laboratory animals.

**Ingestion:** Swallowing may cause gastrointestinal irritation, nausea and diarrhea.

**Skin contact:** Causes skin irritation. Methyl methacrylate has been shown to cause severe irritation when tested undiluted on rabbit skin. Causes skin sensitization. Cases of contact dermatitis has been reported in workers exposed to methyl methacrylate.

**Eye contact:** May cause eye irritation. Methyl methacrylate has been shown to cause mild irritation to the conjunctiva in animal studies.

**Chronic effects from short- and long-term exposure:** In subchronic inhalation studies with methyl methacrylate, systemic toxic effects were seen in rats to the liver, kidney, brain, spleen and bone marrow >1000 ppm. Oral administration of methyl methacrylate to rats resulted in a NOAEL of 200 mg/kg. In a subchronic oral study in rats, a mixture of branched and linear C7-C9 alkyl propionates was shown to cause elevated serum liver enzyme levels and enlarged livers. Treatment-related effects, including mild anemia and toxic effects in the liver, were seen. Slight activity of the thyroid gland was also recorded and considered a secondary response to the effects in the liver. The no observable effect level (NOEL) was 2 mg/kg.

**Reproductive Toxicity:** This product is not expected to cause adverse reproductive or developmental effects. Methyl methacrylate did not cause reproductive effects on male fertility when animals were exposed to 9000 ppm. No teratogenicity, embryotoxicity or fetotoxicity has been observed at exposure levels up to and including 2028 ppm

**Sensitization:** Methyl methacrylate, triethylene glycol dimethyl acrylate, hydroethyl-p-toluidine, ethoxylated nonyl phenol acrylate, dibutyl maleate and bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate have been shown to cause sensitization in animal studies.

**Mutagenicity:** Methyl methacrylate was negative in sister chromatid exchange assay in mammalian cells and in a vivo chromosome aberration assay.

**Carcinogenicity:** Titanium dioxide is listed by IARC as a group 2B carcinogen (possible human carcinogen). Titanium dioxide is encapsulated in a polymer matrix so no inhalable exposure occurs during use or disposal. None of the other components >0.1 are listed by OSHA, IARC, NTP or ACGIH as a carcinogen.

**Acute Toxicity Values:** No toxicity data for the product. Acute Toxicity Estimate: Oral rat LD50 6174 mg/kg  
Methyl Methacrylate: Oral rat LD50 7800 mg/kg; Inhalation rat LC50 3750 mg/L/8 hr; Dermal rabbit LD60 >5000 mg/kg  
Acrylate/Methacrylate Polymer: No toxicity data available  
Triethylene Glycol Dimethacrylate: Dermal rabbit LD50 > 2000 mg/kg  
2-Hydroethyl-p-Toluidine: No toxicity data available  
Ethoxylated Nonyl Phenol Acrylate: Oral rat LD50 >5000 mg/kg, Dermal rabbit LD50 >5000 mg/kg.  
Titanium Dioxide: Oral rat LD50 > 5000 mg/kg, Inhalation rat LC50 6.82 mg/L/4 hr,  
Dibutyl Maleate: Oral rat LD50  $\geq$ 3730 mg/kg, Inhalation rat LC50 > 5000 mg/m<sup>3</sup>/4 hr, Dermal rat LD50 > 2000 mg/kg  
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate: No toxicity data available  
A mixture of branched and linear C7-C9 alkyl propionates: Oral rat LD50 >2000 mg/kg, Dermal rat LD50 >2000 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

Methyl Methacrylate: 96 hr LC50 Pimephales promelas 130 mg/L; 24 hr LC50 daphnia magna 1760 mg/L  
Acrylate/Methacrylate Polymer: No data available  
Triethylene Glycol Dimethacrylate: 96 hr LC50 Danio rerio 16.4 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata > 100 mg/L  
2-Hydroethyl-p-Toluidine: No data available  
Ethoxylated Nonyl Phenol Acrylate: Oral rat LD50 >5000 mg/kg, Dermal rabbit LD50 >5000 mg/kg.  
Titanium Dioxide: No data available  
Dibutyl Maleate: 96 hr LC50 Oncorhynchus mykiss 1.2 mg/L, 48 hr EC50 daphnia magna 21 mg/L  
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate: No data available  
A mixture of branched and linear C7-C9 alkyl propionates: 96 hr LC50 Brachydanio rerio > 9.9 mg/l, 48 hr EC50 daphnia magna 3.2 mg/l, 72 hr EC50 Scenedesmus sp. >2 mg/L

**Persistence and degradability:** Methyl methacrylate, N,N-dimethyl-p-toluidine and triethylene glycol dimethacrylate are readily biodegradable.

**Bioaccumulative potential:** Methyl methacrylate has a BCF of 2.97.

**Mobility in soil:** Methyl methacrylate has a high mobility in soil.

**Other adverse effects:** None known.

## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations.

## 14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
<b>DOT</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
<b>TDG</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
<b>IMDG</b>	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None

IATA	UN1247	Methyl Methacrylate Monomer, Stabilized	3	II	None
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**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form.

**Special precautions:** None known

## 15. REGULATORY INFORMATION

**CERCLA:** This product has a Reportable Quantity (RQ) of 1250 lbs. (based on the RQ for Methyl Methacrylate of 1000 lbs). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Acute Health, Chronic Health, Fire Hazard, Reactive Hazard

**SARA 313 Information: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):**

Methyl Methacrylate	80-62-6	60-80%
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### California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity (birth defects): None

**EPA TSCA Inventory:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

### CANADA:

**Canadian WHMIS Classification:** Class B (Flammable Liquid) Class D Division 2 Subdivision B (Toxic Material Causing other Toxic Effects)

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

## 16. OTHER INFORMATION

**NFPA Rating:** Health = 2    Flammability = 3    Instability = 2  
**HMIS Rating:** Health = 2    Flammability = 3    Physical Hazard = 2

**SDS Revision History:** Converted to GHS format. All sections revised.

**Date of preparation:** September 8, 2014

**Date of last revision:** New SDS

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, Dur-A-Flex, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND USE.