



# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name:** POLYESTER TGIC  
**Product Code:** PE  
**Manufacturer:** Fam Powder Coating Ltd.  
**Address:** 7171 Torbram Road, Unit# 46-47, Mississauga, ON. L4T 3W4, Canada  
**Information Phone:** Tel: +1-905-956-3424 Fax: +1-416-860-3425

## 2. HAZARDOUS IDENTIFICATION

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### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Finely divided powder

**IMMEDIATE CONCERNS:** Do not breathe dust, may cause respiratory tract irritation. May cause skin or eye irritation. Do not swallow. Do not generate dust clouds.

#### **. GHS label elements**

*The product is classified and labeled according to the Globally Harmonized System (GHS).*

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#### **. Hazard pictograms**



**Signal word** *Danger*

#### **Hazard-determining components of labeling:**

- triglycidyl isocyanurate

#### **Hazard statements**

- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H340 May cause genetic defects.
- H373 May cause damage to organs through prolonged or repeated exposure.
- May form combustible dust concentrations in air.

#### **. Precautionary statements**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 If on skin: Wash with plenty of water.
- P310 Immediately call a poison center/doctor.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P402+P404 Store in a dry place. Store in a closed container.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/International regulations.

**. Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.



# SAFETY DATA SHEET

## POTENTIAL HEALTH EFFECTS

EYES: Mildly irritating to the eyes.

SKIN: Is not expected to cause skin irritation.

INGESTION: Not hazardous in normal industrial use. Wash hands before eating drinking or smoking.

INHALATION: Temporary discomfort to the upper respiratory tract may occur due to mechanical irritation.

ROUTES OF ENTRY: Eyes, inhalation.

TARGET ORGANS: Eyes, respiratory tract.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

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*Chemical Characterization: Mixtures*

*Description: Mixture consisting of the following components with harmless additives.*

. Hazardous ingredients:		
13463-67-7	titanium dioxide	10-25%
21645-51-2	aluminium hydroxide	10-25%
7727-43-7	barium sulphate, natural	10-25%
2451-62-9	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione	2.5-10%
7429-90-5	aluminum powder (stabilized)	< 2.5%
12001-26-2	mica	< 2.5%

*Additional information: For the wording of the listed risk phrases refer to section 16.*

## 4. FIRST AID MEASURES

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### General:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

### Inhalation:

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or has stopped, administer artificial respiration. Give nothing by mouth. If unconscious place in recovery position and seek medical advice.

### Eye Contact:

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.

### Skin Contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleanser. Do **NOT** use solvents or thinners.

### Ingestion:

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do **NOT** induce vomiting.

## 5. FIRE-FIGHTING MEASURES

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Flammable Limits: 30 -70 g/m<sup>3</sup>

Flammable Class: While in bulk storage the HMIS/NEPA flammability rating is 1. When powder is suspended in air above their rating is 4.



# SAFETY DATA SHEET

## Extinguishing Media:

Recommended: Alcohol resistant foam, CO<sub>2</sub> blanket, and water spray/mist

Not to be used: High-pressure inert gas (e.g. CO<sub>2</sub>) or water jets, as powder may be dispersed into the local atmosphere.

## Recommendations:

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or watercourses

## 6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing dust. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillages with an electrically protected vacuum cleaner or by wet brushing, and place in a closed container for disposal in accordance with the waste regulations (see Section 13). Do not use a dry brush as dust clouds or static can be created. Do not allow to enter drains or watercourses.

## Contact:

- The local water company immediately if the product enters drains or sewers;
- The relevant Environment agency in the case of contamination of streams, rivers or lakes.

## **Protective Action Criteria for Chemicals:**

<b>. PAC-1:</b>		
13463-67-7	aluminium oxide	15 mg/m <sup>3</sup>
112926-00-8	Silicon dioxide	18 mg/m <sup>3</sup>
13463-67-7	titanium dioxide	30 mg/m <sup>3</sup>
21645-51-2	aluminium hydroxide	8.7 mg/m <sup>3</sup>
7727-43-7	barium sulphate, natural	15 mg/m <sup>3</sup>
12001-26-2	mica	9 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	18 mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	14 mg/m <sup>3</sup>
471-34-1	calcium carbonate	45 mg/m <sup>3</sup>
1309-37-1	diiron trioxide	15 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	0.075 mg/m <sup>3</sup>
1308-14-1	chromium hydroxide(III)	3 mg/m <sup>3</sup>
18282-10-5	tin dioxide	7.6 mg/m <sup>3</sup>
<b>. PAC-2:</b>		
13463-67-7	aluminium oxide	170 mg/m <sup>3</sup>
112926-00-8	Silicon dioxide	200 mg/m <sup>3</sup>
13463-67-7	titanium dioxide	30 mg/m <sup>3</sup>
21645-51-2	aluminium hydroxide	73 mg/m <sup>3</sup>
7727-43-7	barium sulphate, natural	170 mg/m <sup>3</sup>
12001-26-2	mica	99 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	740 mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	110 mg/m <sup>3</sup>
471-34-1	calcium carbonate	210mg/m <sup>3</sup>
1309-37-1	diiron trioxide	360 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	33 mg/m <sup>3</sup>

# SAFETY DATA SHEET

1308-14-1	chromium hydroxide(III)	33 mg/m <sup>3</sup>
18282-10-5	tin dioxide	85mg/m <sup>3</sup>
<b>. PAC-3:</b>		
13463-67-7	aluminium oxide	990 mg/m <sup>3</sup>
112926-00-8	Silicon dioxide	1200 mg/m <sup>3</sup>
13463-67-7	titanium dioxide	2000 mg/m <sup>3</sup>
21645-51-2	aluminium hydroxide	440 mg/m <sup>3</sup>
7727-43-7	barium sulphate, natural	990 mg/m <sup>3</sup>
12001-26-2	mica	590 mg/m <sup>3</sup>
7631-86-9	silicon dioxide, chemically prepared	4500mg/m <sup>3</sup>
1314-23-4	zirconium dioxide	680 mg/m <sup>3</sup>
471-34-1	calcium carbonate	1300mg/m <sup>3</sup>
1309-37-1	diiron trioxide	2200 mg/m <sup>3</sup>
14808-60-7	quartz (SiO <sub>2</sub> )	200 mg/m
1308-14-1	chromium hydroxide(III)	200 mg/m <sup>3</sup>
18282-10-5	tin dioxide	510mg/m <sup>3</sup>

## 7. HANDLING AND STORAGE

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### Handling

Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational Exposure Limit Values.

Electrical equipment and lighting should be protected to appropriate standards and to prevent dust coming into contact with hot surfaces, sparks or other ignition surfaces.

Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Avoid the inhalation of dusts. Smoking, eating and drinking should be prohibited in areas of storage and use. For Occupational Exposure Controls see Section 8.

Always keep in containers made of the same material as the supply container. Good housekeeping standards and regular safe removal of waste materials will minimise the risks of spontaneous combustion and other fire hazards.

The product may charge electro statically. Use earthing leads when transferring from one container to another. Operators should wear anti-static footwear and clothing and floors should be electrically conductive.

The Manual Handling Operations Regulations may apply to the handling of containers of this product. Refer to the guide weight indicated on the container when carrying out assessments.

### **Information about protection against explosions and fires:**



*Keep ignition sources away - Do not smoke.*

*Dust can combine with air to form an explosive mixture.*

### Storage

Observe the label precautions. Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers that are opened should be properly resealed and kept upright to prevent leakage. The principles contained in the HSE guidance note Storage of Packaged Dangerous Substances should be observed when storing this product.



# SAFETY DATA SHEET

*Shelf life- 1 year from date of manufacturing.*

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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**Persons with a history of respiratory problems or allergic responses should only be exposed to, or handle, this product under appropriate medical supervision.**

### Exposure Controls:

Avoid the inhalation of dusts. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of dusts below the relevant occupational exposure limit, suitable respiratory protective equipment should be worn (see 'Occupational Exposure Controls' below).

*Additional information about design of technical systems: No further data; see item 7.*

### **Components with critical values that require monitoring at the workplace:**

**13463-67-7 titanium dioxide**

EL (Canada) 10 mg/m<sup>3</sup>

IARC 2B

EV (Canada) 10 mg/m<sup>3</sup>

\*total dust

PEL (U.S.A) 15\* mg/m<sup>3</sup>

\*total dust

REL (U.S.A) See Pocket Guide App. A

TLV (U.S.A) 10 mg/m<sup>3</sup>

\*inhalable fraction

### Occupational Exposure Controls

**All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations**

### **Respiratory Protection:**

Air-fed respiratory protective equipment (to EN 149) should be worn when this product is sprayed if the exposure of the sprayer or other people nearby cannot be controlled to below the occupational Exposure Limit Values and engineering controls and methods cannot reasonably be improved.

### **Hand Protection:**

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed. Hand protection should conform to EN 388. Barrier creams may help to protect exposed areas of skin, but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

### **Eye Protection:**

Eye protection (to EN 166/170) designed to protect against exposure to dusts should be worn when there is a likelihood of exposure.

### **Skin Protection:**

Cotton or cotton/synthetic overalls or coveralls compliant with EN 340 are normally suitable. Care should be taken in the selection of protective clothing to ensure that inflammation and irritation of the skin at the neck and wrists through contact with the powder is avoided. Regular skin inspection of users of this product is recommended.

**Always wash your hands before eating, smoking or using the toilet.**

**Environmental exposure control:** See Section 12 for detailed information

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# SAFETY DATA SHEET

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	fine powder	
Specific gravity:	1.5±0.05	method: [Displacement]
Minimum explosive concentration (LEL)	20-70 g/m <sup>3</sup>	method:
Solubility in water:	insoluble	
Minimum ignition temperature	400 °C	method:
Minimum ignition energy	5-20 mJ	method:

## 10. STABILITY AND REACTIVITY

Stable under the recommended storage and handling conditions, (see Section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

### Reactivity

#### Chemical stability

<b>Conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Possibility of hazardous reactions:</b>	No dangerous reactions known.
<b>Conditions to avoid:</b>	No further relevant information available.
<b>Incompatible materials:</b>	No further relevant information available.
<b>Hazardous decomposition products:</b>	In case of fire: CO, CO <sub>2</sub> , NO <sub>x</sub>

## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Dust may be irritating to the eyes

### Acute toxicity:

. LD/LC50 values that are relevant for classification:		
2451-62-9 1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione		
Oral	LD50	188-1,450 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	0.309-650 mg/l (rat)

### GENERAL COMMENTS:

Triglycidylisocyanurate - Over exposure to this product may cause eye and skin irritation and skin sensitization in susceptible individuals. TGIC gives a positive response in the Ames, mouse lymphoma and mouse spermatoginal (inhalation) assays and a negative response in the following assays: oral spermatocyte aberration (mouse): oral dominant lethal (TIF-AG and ICR); inhalation dominant lethal (CD-1) and intraperitoneal spot test (mouse). Studies in a powder coating containing 4-6% TGIC prepared by normal commercial production techniques gave the following result. Not irritating to the eyes and skin, not sensitizing (skin): Ames test: negative: chromosomal aberrations (mouse) negative (oral) at less than or equal to 5000mg/kg; negative (inhalation) less than or equal to 2000 mg/kg. The manufacturer of TGIC currently recommends a TLV-STEL of 0.08mg/ m<sup>3</sup>. A valid industrial method for determining TGIC now exists. It is recommending that workers exposed to TGIC containing powders wear respiratory protection and other personal protective equipments as described in section 8.

### Carcinogenic Categories

**IARC (International Agency for Research on Cancer)**

13463-67-7 titanium dioxide 2B

112926-00-8 Silicon dioxide 3

7631-86-9 silicon dioxide, chemically prepared 3

9002-88-4 Ethane, homopolymer 3

14808-60-7 quartz (SiO<sub>2</sub>) 1

**NTP (National Toxicology Program)**



# SAFETY DATA SHEET

14808-60-7 quartz (SiO<sub>2</sub>) K

## 12. ECOLOGICAL INFORMATION

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### . Toxicity

. **Aquatic toxicity:** No further relevant information available.

. **Persistence and degradability** No further relevant information available.

. **Behaviour in environmental systems:**

. **Bioaccumulative potential** No further relevant information available.

. **Mobility in soil** No further relevant information available.

. **Additional ecological information:**

. **General notes:**

Water danger class 3 (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

. **Results of PBT and vPvB assessment**

. **PBT:** Not applicable.

. **vPvB:** Not applicable.

. **Other adverse effects** No further relevant information available.

## 13. DISPOSAL CONSIDERATIONS

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Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under The Control of Pollution Act and The Environmental Protection Act.

[Using the information provided in this safety data sheet, advice should be obtained from the relevant environment agency whether the Special Waste Regulations apply.]

## 14. TRANSPORT INFORMATION

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### Transport within the user's premises

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### External Transport

This product is not classified as dangerous for carriage.

### US Ground (DOT)

Not Regulated for Transportation.

### Canada (TDG)

Not Regulated for Transportation.

### IMO

Not Regulated for Transportation.

### IATA/ICAO

Not Regulated for Transportation.

**UN-Number. ADR** N/A.

**UN proper shipping name** N/A.

**Packing group. ADR, IMDG, IATA** N/A.

**Environmental hazards:**

**Marine pollutant:** No.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

**U.S Surface Freight Class:** 55

**Bulk Freight Class:** 55

**Label:** None



# SAFETY DATA SHEET

Other shipping information: not regulated

## 15. REGULATORY INFORMATION

### . SARA (Superfund Amendments and Reauthorization Act) :

<b>Section 355 (Extremely hazardous substances) :</b>	
None of the ingredients is listed.	
<b>Section 313 (Specific toxic chemical listings):</b>	
7727-43-7	barium sulphate, natural
7429-90-5	aluminum powder (stabilized)
1344-28-1	aluminium oxide
<b>TSCA (Toxic Substances Control Act):</b>	
All the ingredients are listed.	

### . Proposition 65:

<b>Chemicals known to cause cancer</b>	
13463-67-7	titanium dioxide
<b>Chemicals known to cause reproductive toxicity for females</b>	
None of the ingredients is listed.	
<b>Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
<b>Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	

### . Cancerogenity categories

<b>. EPA (Environmental Protection Agency)</b>		
7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
<b>TLV (Threshold Limit Value established by ACGIH)</b>		
13463-67-7	titanium dioxide	A4
1309-37-1	Diirion trioxide	A4
1332-58-7	kaolin	A4
1344-28-1	aluminium oxide	A4
1314-23-4	zirconium dioxide	A4
14808-60-7	quartz (SiO <sub>2</sub> )	A2
<b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
13463-67-7	titanium dioxide	
14808-60-7	quartz (SiO <sub>2</sub> )	

## 16. OTHER INFORMATION

### NEPA CODES

Fire: 1 Health: 3 Reactivity: 1 Special: 0

### HMIS CODES:

Fire: 1 Health: 3 Reactivity: 1 Special: 0





# SAFETY DATA SHEET

**MANUFACTURER DISCLAIMER:**

All the information herein is to the best of our knowledge true and accurate. However, since we have no control on how our products are shipped. Stored, handled or used we make no guarantee of results and will not be held liable for any damages incurred. All chemicals should be used with caution and we make no guarantee that others hazards may not be present. It is the responsibility of the user to ensure all local, state and federal regulations are complied with.