

# **GU80-1 Custom Topcoat - FPLI1GU8193**

# ICP Building Solutions Group/Pli-Dek

Version No: 4.5

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **04/06/2020** Print Date: **04/06/2020** S.GHS.USA.EN

## **SECTION 1 IDENTIFICATION**

#### **Product Identifier**

Product name	GU80-1 Custom Topcoat - FPLI1GU8193			
Synonyms	Not Available			
Other means of identification	Not Available			

#### Recommended use of the chemical and restrictions on use

Relevant identified uses Water-borne Coatings

# Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Building Solutions Group/Pli-Dek			
Address	65 W. Watkins Street Phoenix AZ Not applicable			
Telephone	35-2277			
Fax	lot Available			
Website	www.ICPGROUP.com			
Email	Not Available			

#### **Emergency phone number**

Association / Organisation	ChemTel				
Emergency telephone numbers	1-800-255-3924				
Other emergency telephone numbers	1-813-248-0585				

### **SECTION 2 HAZARD(S) IDENTIFICATION**

# Classification of the substance or mixture

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification

Specific target organ toxicity - repeated exposure Category 2, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Skin Sensitizer Category 1, Germ cell mutagenicity Category 2, Skin Corrosion/Irritation Category 1A

# Label elements

Hazard pictogram(s)







SIGNAL WORD

DANGE

# Hazard statement(s)

H373	May cause damage to organs through prolonged or repeated exposure.					
H335	May cause respiratory irritation.					
H317	May cause an allergic skin reaction.					
H341	Suspected of causing genetic defects.					
H314	Causes severe skin burns and eye damage.					

#### **GU80-1 Custom Topcoat - FPLI1GU8193**

Print Date: 04/06/2020

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.			
P102	Keep out of reach of children.			

#### Precautionary statement(s) Prevention

P202	Do not handle until all safety precautions have been read and understood.				
P271	e only outdoors or in a well-ventilated area.				
P272	ninated work clothing should not be allowed out of the workplace.				
P260	o not breathe dust/fume/gas/mist/vapors/spray				
P264	Wash thoroughly after handling.				
P280	Wear protective gloves/protective clothing/eye protection/face protection.				

#### Precautionary statement(s) Response

P314	Get medical advice/attention if you feel unwell.					
P301+P330+P331	SWALLOWED: Rinse mouth. Do NOT induce vomiting.					
P303+P361+P353	SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.					
P333+P313	SKIN irritation or rash occurs, get medical advice/attention.					
P304+P340	F INHALED: Remove person to fresh air and keep comfortable for breathing.					
P305+P351+P338	IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.					
P363	Wash contaminated clothing before reuse					

#### Precautionary statement(s) Storage

P405	Store locked up.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	

# Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

#### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name	
14808-60-7	40-55	silica crystalline - quartz	
7429-90-5	5-10	aluminium	
1305-78-8	0-5	calcium oxide	
65997-15-1	40	portland cement	

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

#### **SECTION 4 FIRST-AID MEASURES**

# Description of first aid measures

If this product comes in contact with the eyes:

- ▶ Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Eye Contact

  Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
  - ► Transport to hospital or doctor without delay.
    - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
    - ▶ DO NOT attempt to remove particles attached to or embedded in eye
    - Lay victim down, on stretcher if available and pad **BOTH** eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye.
    - ▶ Seek urgent medical assistance, or transport to hospital.

# If skin or hair contact occurs:

Skin Contact

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- ▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- ► Transport to hospital, or doctor.

 Version No: 4.5
 <#PAGE\_DIV>
 Issue Date: 04/06/2020

 Print Date: 04/06/2020
 Print Date: 04/06/2020

#### GU80-1 Custom Topcoat - FPLI1GU8193

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Inhalation Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary Transport to hospital, or doctor, without delay ▶ For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. wed do **NOT** induce vomiting If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Ingestion Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ► Transport to hospital or doctor without delay.

# Most important symptoms and effects, both acute and delayed

See Section 11

# Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to dichromates and chromates:

- Absorption occurs from the alimentary tract and lungs.
- ▶ The kidney excretes about 60% of absorbed chromate within 8 hours of ingestion. Urinary excretion may take up to 14 days.
- Establish airway, breathing and circulation. Assist ventilation.
- ▶ Induce emesis with Ipecac Syrup if patient is not convulsing, in coma or obtunded and if the gag reflex is present.
- Otherwise use gastric lavage with endotracheal intubation.
- Fluid balance is critical. Peritoneal dialysis, haemodialysis or exchange transfusion may be effective although available data is limited.
- ▶ British Anti-Lewisite, ascorbic acid, folic acid and EDTA are probably not effective.
- There are no antidotes.
- Primary irritation, including chrome ulceration, may be treated with ointments comprising calcium-sodium-EDTA. This, together with the use of frequently renewed dressings, will ensure rapid healing of any ulcer which may develop.

The mechanism of action involves the reduction of Cr (VI) to Cr(III) and subsequent chelation; the irritant effect of Cr(III)/ protein complexes is thus avoided. [ILO Encyclopedia]

[Ellenhorn and Barceloux: Medical Toxicology]

- Manifestation of aluminium toxicity include hypercalcaemia, anaemia, Vitamin D refractory osteodystrophy and a progressive encephalopathy (mixed dysarthria-apraxia of speech, asterixis, tremulousness, myoclonus, dementia, focal seizures). Bone pain, pathological fractures and proximal myopathy can occur.
- Symptoms usually develop insidiously over months to years (in chronic renal failure patients) unless dietary aluminium loads are excessive.
- Serum aluminium levels above 60 ug/ml indicate increased absorption. Potential toxicity occurs above 100 ug/ml and clinical symptoms are present when levels exceed 200 ug/ml.
- ▶ Deferoxamine has been used to treat dialysis encephalopathy and osteomalacia. CaNa2EDTA is less effective in chelating aluminium.

[Ellenhorn and Barceloux: Medical Toxicology]

For acute or short-term repeated exposures to highly alkaline materials:

- ▶ Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- ▶ Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- ▶ The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- ▶ Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

- ▶ Milk and water are the preferred diluents
- No more than 2 glasses of water should be given to an adult.
- ▶ Neutralising agents should never be given since exothermic heat reaction may compound injury.
- \* Catharsis and emesis are absolutely contra-indicated.
- \* Activated charcoal does not absorb alkali.
- \* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- ▶ If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- ▶ Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- ▶ Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

# **SECTION 5 FIRE-FIGHTING MEASURES**

#### **Extinguishing media**

Metal dust fires need to be smothered with sand, inert dry powders.

DO NOT USE WATER, CO2 or FOAM

► DO NOT use halogenated fire extinguishing agents

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

# Special protective equipment and precautions for fire-fighters

Fire Fighting

- ► Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.

Print Date: 04/06/2020 **GU80-1 Custom Topcoat - FPLI1GU8193** 

	<ul> <li>When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.</li> <li>When heated to extreme temperatures, (&gt;1700 deg.C) amorphous silica can fuse.</li> </ul>
Fire/Explosion Hazard	▶ DO NOT disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal.  Decomposition may produce toxic fumes of: silicon dioxide (SiO2) metal oxides  When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles.  May emit poisonous fumes.  May emit corrosive fumes.

#### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

#### Mothada and material for containment and cleaning

Methods and material for containment and cleaning up						
Minor Spills	Clean up waste regularly and abnormal spills immediately. Avoid breathing dust and contact with skin and eyes.					
Major Spills	<ul> <li>Do not use compressed air to remove metal dusts from floors, beams or equipment</li> <li>Vacuum cleaners, of flame-proof design, should be used to minimise dust accumulation.</li> <li>Use non-sparking handling equipment, tools and natural bristle brushes.</li> <li>If molten:</li> <li>▶ Contain the flow using dry sand or salt flux as a dam.</li> <li>▶ All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use.</li> </ul>					

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 HANDLING AND STORAGE**

#### Precautions for safe handling

#### Safe handling

For molten metals:

-Molten metal and water can be an explosive combination. The risk is greatest when there is sufficient molten metal to entrap or seal off water.

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Other information
- Store in original containers.
- Keep containers securely sealed.

# Conditions for safe storage, including any incompatibilities

# Suitable container

▶ Bulk bags: Reinforced bags required for dense materials.

The material is described as an electropositive metal.

The activity or electromotive series of metals is a listing of the metals in decreasing order of their reactivity with hydrogen-ion sources such as water and acids.

For aluminas (aluminium oxide):

Incompatible with hot chlorinated rubber.

In the presence of chlorine trifluoride may react violently and ignite.

# Calcium oxide:

- ▶ reacts violently with water, evolving high quantities of heat
- reacts violently, with possible ignition or explosion, with acids, anilinium perchlorate, bromine pentafluoride, chlorine trifluoride, fluorine, hydrogen fluoride, hydrozine, hydrogen sulfide, hydrogen trisulfide, isopropyl isocyanide dichloride, light metals, lithium, magnesium, powdered aluminium, phosphorus, potassium, sulfur trioxide
- ▶ increase the explosive sensitivity of azides, nitroalkanes (e.g. nitroethane, nitromethane, 1-nitropropane etc.)
- F is incompatible with boric acid, boron trifluoride, carbon dioxide, ethanol, halogens (such as fluorine), metal halides, phosphorus pentoxide, selenium oxychloride, sulfur dioxide and many organic materials

#### Storage incompatibility

#### Calcium sulfate:

- Freacts violently with reducing agents, acrolein, alcohols, chlorine trifluoride, diazomethane, ethers, fluorine, hydrazine, hydrazinium perchlorate, hydrogen peroxide, finely divided aluminium or magnesium, peroxyfuroic acid, red phosphorus, sodium acetylide
- ▶ sensitises most organic azides which are unstable shock- and heat- sensitive explosives
- ▶ may form explosive materials with 1,3-di(5-tetrazolyl)triazene
- $\qquad \qquad \textbf{is incompatible with glycidol, isopropyl chlorocarbonate, nitrosyl perchlorate, sodium borohydride} \\$
- ▶ is hygroscopic; reacts with water to form gypsum and Plaster of Paris

#### For iron oxide (ferric oxide):

- Avoid storage with aluminium, calcium hypochlorite and ethylene oxide.
- Risk of explosion occurs following reaction with powdered aluminium, calcium silicide, ethylene oxide (polymerises), carbon monoxide, magnesium and perchlorates.

#### Silicas:

- react with hydrofluoric acid to produce silicon tetrafluoride gas
- react with xenon hexafluoride to produce explosive xenon trioxide
- reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds

# **GU80-1 Custom Topcoat - FPLI1GU8193**

Print Date: 04/06/2020

- ► may react with fluorine, chlorates
- are incompatible with strong oxidisers, manganese trioxide, chlorine trioxide, strong alkalis, metal oxides, concentrated orthophosphoric acid, vinyl acetate
- may react vigorously when heated with alkali carbonates.
   WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive.
- ▶ Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- ► These trifluorides are hypergolic oxidisers.
- ▶ Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid.
- ► Avoid contact with copper, aluminium and their alloys.

# SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Control parameters**

### OCCUPATIONAL EXPOSURE LIMITS (OEL)

### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	silica crystalline - quartz	Cristobalite, Quartz, Tridymite, Tripoli	0.05 mg/m3	Not Available	Not Available	Ca See Appendix A
US OSHA Permissible Exposure Levels (PELs) - Table Z3	silica crystalline - quartz	Silica: Crystalline Quartz	10 / (% SiO2 + 2) mg/m3 / 250 / (%SiO2 + 5) mppcf	Not Available	Not Available	(Name ((Respirable) ((f) This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect,))); (TWA mppcf (((b) The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.))); (TWA mg/m3 (((e) Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics: Aerodynamic diameter (unit density sphere), Percent passing selector 2, 90   2.5, 75   3.5, 50   5.0, 25   10, 0. The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m3 in the table for coal dust is 4.5 mg/m3K.)))
US OSHA Permissible Exposure Levels (PELs) - Table Z1	silica crystalline - quartz	Silica, crystalline, respirable dust: Quartz	Not Available	Not Available	Not Available	see 1910.1053; (7) See Table Z-3 for the exposure limit for any operations or sectors where the exposure limit in § 1910.1053 is stayed or is otherwise not in effect.
US ACGIH Threshold Limit Values (TLV)	silica crystalline - quartz	Silica, crystalline -α-quartz and cristobalite (Inhalable fraction and vapor)	0.025 ppm / 0.025 mg/m3	Not Available	Not Available	Pulm fibrosis; lung cancer
US NIOSH Recommended Exposure Limits (RELs)	aluminium	Aluminium, Aluminum metal, Aluminum powder, Elemental aluminum	10 (total), 5 (resp) mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	aluminium	Aluminum, metal (as Al): Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	aluminium	Aluminum, metal (as Al): Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	aluminium	Aluminum metal and insoluble compounds (Inhalable fraction and vapor)	1 mg/m3	Not Available	Not Available	Pneumoconiosis; LRT irr; neurotoxicity
US NIOSH Recommended Exposure Limits (RELs)	calcium oxide	Burned lime, Burnt lime, Lime, Pebble lime, Quick lime, Unslaked lime	2 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	calcium oxide	Calcium oxide	5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	calcium oxide	Calcium oxide	2 mg/m3	Not Available	Not Available	URT irr
US NIOSH Recommended Exposure Limits (RELs)	portland cement	Cement, Hydraulic cement, Portland cement silicate [Note: A class of hydraulic cements containing tri- and dicalcium silicate in addition to alumina, tricalcium aluminate, and iron oxide.]	10 (total), 5 (resp) mg/m3	Not Available	Not Available	Not Available

Version No: 4.5 <-#PAGE\_DIV> Issue Date: 04/06/2020 Print Date: 04/06/2020

### GU80-1 Custom Topcoat - FPLI1GU8193

US OSHA Permissible Exposure Levels (PELs) - Table Z3	portland cement	Portland cement	50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	portland cement	Portland cement: Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	portland cement	Portland cement: Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	portland cement	Portland cement (Respirable particulate matter)	1 mg/m3	Not Available	Not Available	Pulm func; resp symptoms; asthma

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
silica crystalline - quartz	Silica, crystalline-quartz; (Silicon dioxide)	0.075 mg/m3	33 mg/m3	200 mg/m3
calcium oxide	Calcium oxide	6 mg/m3	110 mg/m3	660 mg/m3

Ingredient	Original IDLH	Revised IDLH
silica crystalline - quartz	25 mg/m3 / 50 mg/m3	Not Available
aluminium	Not Available	Not Available
calcium oxide	25 mg/m3	Not Available
portland cement	5,000 mg/m3	Not Available

#### **Exposure controls**

#### Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

# Personal protection











# Eye and face protection

- ▶ Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.
- ► Chemical goggles.whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.

# Skin protection

See Hand protection below

# ► Elbow length PVC gloves

#### NOTE:

▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

#### Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- ▶ Protective gloves eg. Leather gloves or gloves with Leather facing
- Neoprene rubber gloves

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

► polychloroprene.

# **Body protection**

See Other protection below

# Other protection

- Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]
- Fundamental Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels.
- Overalls
- ▶ P.V.C.

#### Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

If inhalation risk above the TLV exists, wear approved dust respirator.

Use respirators with protection factors appropriate for the exposure level.

- ▶ Up to 5 X TLV, use valveless mask type; up to 10 X TLV, use 1/2 mask dust respirator
- Up to 50 X TLV, use full face dust respirator or demand type C air supplied respirator
- Up to 500 X TLV, use powered air-purifying dust respirator or a Type C pressure demand supplied-air respirator
- Over 500 X TLV wear full-face self-contained breathing apparatus with positive pressure mode or a combination respirator with a Type C positive pressure supplied-air full-face respirator and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode
- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

# **GU80-1 Custom Topcoat - FPLI1GU8193**

Print Date: 04/06/2020

- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- ▶ Use approved positive flow mask if significant quantities of dust becomes airborne.
- ► Try to avoid creating dust conditions.

# **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

### Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Divided Solid Crystalline	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

# **SECTION 10 STABILITY AND REACTIVITY**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

# **SECTION 11 TOXICOLOGICAL INFORMATION**

# Information on toxicological effects

Inhaled	There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs.  The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.  Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane.  Inhalation may result in ulcers or sores of the lining of the nose (nasal mucosa), and lung damage.  Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.  If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.  Effects on lungs are significantly enhanced in the presence of respirable particles.  Not normally a hazard due to non-volatile nature of product  Acute silicosis occurs under conditions of extremely high silica dust exposure particularly when the particle size of the dust is small. The disease is rapidly progressive and spreads widely through the lungs within months of the initial exposure and causing death within 1 to 2 years.
Ingestion	There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs. Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.  Acute toxic responses to aluminium are confined to the more soluble forms.  The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.  Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract

Accidental ingestion of the material may be damaging to the health of the individual.

#### GU80-1 Custom Topcoat - FPLI1GU8193

Print Date: 04/06/2020

The material can produce severe chemical burns following direct contact with the skin.

There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

Though considered non-harmful, slight irritation may result from contact because of the abrasive nature of the aluminium oxide particles. Thus it may cause itching and skin reaction and inflammation.

Four students received severe hand burns whilst making moulds of their hands with dental plaster substituted for Plaster of Paris. The dental plaster known as "Stone" was a special form of calcium sulfate hemihydrate containing alpha-hemihydrate crystals that provide high compression strength to the moulds.

Handling wet cement can cause dermatitis. Cement when wet is quite alkaline and this alkali action on the skin contributes strongly to cement contact dermatitis since it may cause drying and defatting of the skin which is followed by hardening, cracking, lesions developing, possible infections of lesions and penetration by soluble salts.

Skin contact may result in severe irritation particularly to broken skin. Ulceration known as "chrome ulcers" may develop.

Open cuts, abraded or irritated skin should not be exposed to this material

Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

This material can cause inflammation of the skin on contact in some persons.

#### Eye

Skin Contact

If applied to the eyes, this material causes severe eye damage.

Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris.

Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.

Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure.

Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

There is applie evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other.

There is ample evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other information.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Animal testing shows long term exposure to aluminium oxides may cause lung disease and cancer, depending on the size of the particle. The smaller the size, the greater the tendencies of causing harm.

#### Chronic

Red blood cells and rabbit alveolar macrophages exposed to calcium silicate insulation materials in vitro showed haemolysis in one study but not in another. Both studies showed the substance to be more cytotoxic than titanium dioxide but less toxic than asbestos.

Exposure to large doses of aluminium has been connected with the degenerative brain disease Alzheimer's Disease.

Cement contact dermatitis (CCD) may occur when contact shows an allergic response, which may progress to sensitisation. Sensitisation is due to soluble chromates (chromate compounds) present in trace amounts in some cements and cement products.

Crystalline silicas activate the inflammatory response of white blood cells after they injure the lung epithelium. Chronic exposure to crystalline silicas reduces lung capacity and predisposes to chest infections.

Overexposure to the breathable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity and chest infections.

Chronic excessive intake of iron have been associated with damage to the liver and pancreas. People with a genetic disposition to poor control over iron are at an increased risk.

Chromium (III) is an essential trace mineral. Chronic exposure to chromium (III) irritates the airways, malnourishes the liver and kidneys, causes fluid in the lungs, and adverse effects on white blood cells, and also increases the risk of developing lung cancer.

GU80-1 Custom Topcoat -	TOXICITY	IRRITATION	
FPLI1GU8193	Not Available	Not Available	
	TOXICITY	IRRITATION	
silica crystalline - quartz	Oral (rat) LD50: =500 mg/kg <sup>[2]</sup>	Not Available	
	TOXICITY	IRRITATION	
aluminium	Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
	TOXICITY	IRRITATION	
calcium oxide	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>	
	Oral (rat) LD50: ~500-2000 mg/kg <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>	
	TOXICITY	IRRITATION	
portland cement	Not Available	Not Available	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		

# Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation.

For aluminium compounds:

# GU80-1 Custom Topcoat -FPLI1GU8193

Aluminium present in food and drinking water is poorly absorbed through the gastrointestinal tract. The bioavailability of aluminium is dependent on the form in which it is ingested and the presence of dietary constituents with which the metal cation can complex Ligands in food can have a marked effect on absorption of aluminium, as they can either enhance uptake by forming absorbable (usually water soluble) complexes (e.g., with carboxylic acids such as citric and lactic), or reduce it by forming insoluble compounds (e.g., with phosphate or dissolved silicate). Considering the available human and animal data it is likely that the oral absorption of aluminium can vary 10-fold based on chemical form alone.

#### SILICA CRYSTALLINE -QUARTZ

WARNING: For inhalation exposure ONLY: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS

The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<5 um) crystalline silica as being

# **GU80-1 Custom Topcoat - FPLI1GU8193**

Print Date: 04/06/2020

	carcinogenic to humans . This classification is based of the carcinogenicity of inhaled silica in the forms of qua		ridence from epidemiological studies of humans for
GU80-1 Custom Topcoat - FPLI1GU8193 & CALCIUM OXIDE & PORTLAND CEMENT	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.		
GU80-1 Custom Topcoat - FPLI1GU8193 & PORTLAND CEMENT	The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.		
ALUMINIUM & PORTLAND CEMENT	No significant acute toxicological data identified in literature search.		
Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	<b>~</b>	Reproductivity	×
Serious Eye Damage/Irritation	<b>✓</b>	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	<b>✓</b>	STOT - Repeated Exposure	<b>✓</b>
Mutagenicity	✓	Aspiration Hazard	×

Legend:

X – Data either not available or does not fill the criteria for classification – Data available to make classification

#### **SECTION 12 ECOLOGICAL INFORMATION**

#### Toxicity

01100 4 0 T T	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
GU80-1 Custom Topcoat - FPLI1GU8193	Not Available	Not Available	Not Available		Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
silica crystalline - quartz	Not Available	Not Available	Not Available		Not Available	Not Availabl
	ENDPOINT	TEST DURATION (HR)	SPECIES	VAL	UE	SOURC
	LC50	96	Fish	0.00	1-0.134mg/L	2
aluminium	EC50	48	Crustacea	0.73	64mg/L	2
	EC50	72	Algae or other aquatic plants 0.001-		1-0.799mg/L	2
	BCF	360	Algae or other aquatic plants	Algae or other aquatic plants 9mg/L		4
	NOEC	168	Crustacea	0.00	1-mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
	LC50	96	Fish		50.6mg/L	2
calcium oxide	EC50	48	Crustacea		49.1mg/L	2
calcium oxide	EC50	72	Algae or other aquatic plants		>14mg/L	2
	EC10	72	Algae or other aquatic plants	Algae or other aquatic plants		2
	NOEC	72	Algae or other aquatic plants		14mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
portland cement	Not Available	Not Available	Not Available		Not Available	Not Availabl

Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

#### For Metal

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms.

# For Silica:

Environmental Fate: Most documentation on the fate of silica in the environment concerns dissolved silica, in the aquatic environment, regardless of origin, (man-made or natural), or structure, (crystalline or amorphous).

Terrestrial Fate: Silicon makes up 25.7% of the Earth ⊕s crust, by weight, and is the second most abundant element, being exceeded only by oxygen.

For Chromium: Chromium is poorly absorbed by cells found in microorganisms, plants and animals. Hexavalent chromate anions are readily transported into cells and toxicity is closely linked to the higher oxidation state.

#### For chromium:

Aquatic Fate - Most chromium released into water will be deposited in the sediment. A small percentage of chromium can be found in soluble and insoluble forms with soluble chromium making up a very small percentage of the total chromium. For Aluminium and its Compunds and Salts:

Environmental Fate - As an element, aluminium cannot be degraded in the environment, but may undergo various precipitation or ligand exchange reactions. Aluminium in compounds has only one oxidation state (+3), and would not undergo oxidation-reduction reactions under environmental conditions.

DO NOT discharge into sewer or waterways.

Version No: 4.5 <-#PAGE\_DIV> Issue Date: 04/06/2020 Print Date: 04/06/2020

### GU80-1 Custom Topcoat - FPLI1GU8193

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

#### Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

#### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

#### **SECTION 13 DISPOSAL CONSIDERATIONS**

#### Waste treatment methods

- ▶ Containers may still present a chemical hazard/ danger when empty.
- ▶ Return to supplier for reuse/ recycling if possible.

# Product / Packaging disposal

- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their
- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 TRANSPORT INFORMATION**

#### **Labels Required**

Marine Pollutant	NO
warme i onutant	110

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

# **SECTION 15 REGULATORY INFORMATION**

#### Safety, health and environmental regulations / legislation specific for the substance or mixture

#### SILICA CRYSTALLINE - QUARTZ IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1 : Carcinogenic to humans

US - California Proposition 65 - Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US DOE Temporary Emergency Exposure Limits (TEELs)

US National Toxicology Program (NTP) 14th Report Part A Known to be Human Carcinogens

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Levels (PELs) - Table Z3

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US OSHA Permissible Exposure Limits - Annotated Table Z-3 (Spanish)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### ALUMINIUM IS FOUND ON THE FOLLOWING REGULATORY LISTS

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

#### **GU80-1 Custom Topcoat - FPLI1GU8193**

Print Date: **04/06/2020** 

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### CALCIUM OXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### PORTLAND CEMENT IS FOUND ON THE FOLLOWING REGULATORY LISTS

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Levels (PELs) - Table Z3

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US OSHA Permissible Exposure Limits - Annotated Table Z-3 (Spanish)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SECTION 311/312 HAZARD CATEGORIES

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	Yes
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

### US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

None Reported

# State Regulations

# US. CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

# US - CALIFORNIA PROPOSITION 65 - CARCINOGENS: LISTED SUBSTANCE

Silica, crystalline (airborne particles of respirable size) Listed

# **National Inventory Status**

-			
National Inventory	Status		

### GU80-1 Custom Topcoat - FPLI1GU8193

Print Date: **04/06/2020** 

Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (silica crystalline - quartz; aluminium; calcium oxide; portland cement)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (aluminium; portland cement)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	No (portland cement)
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

### **SECTION 16 OTHER INFORMATION**

Revision Date	04/06/2020
Initial Date	01/29/2020

#### CONTACT POINT

#### **SDS Version Summary**

Version	Issue Date	Sections Updated
3.5.1.1.1	04/06/2020	Ingredients

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

#### **Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit $_{\circ}$ 

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection
OTV: Odour Threshold Value

BCF: BioConcentration Factors

BCF: BioConcentration Factors BEI: Biological Exposure Index

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<sup>\*\*</sup>PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES\*\*