
Section 1: Identification

Product Identifier

GFRC

Other means of identification

Synonyms

Glass Fiber Reinforced Concrete

SDS#

GFRC

Recommended Use

Architectural building products

Recommended Restrictions

Not for use as load bearing components

Manufacturer Information

MADE Composites Inc.
228 Toryork Drive
Toronto, Ontario M9L 1Y1
(Canada)

Tel: 416.745.5674

Emergency telephone number

Chemtrec - Emergency 800.424.9300

Section 2: Hazard identification

Classification of the Substance or Mixture

GFRC Glass Fiber Reinforced Concrete is a mixture of ingredients molded into a solid manufactured "article" and not hazardous in its solid form. However, exposure to dust from cutting, grinding or otherwise altering these articles may irritate the eyes, skin, nose, throat or respiratory tract. Hazards listed are associated with individual ingredients used in tile manufacture of these articles. See Sections 8 and 11 for information concerning exposure and personal protection.

Physical Hazards

Not classified

Health Hazards

Serious eye damage/eye irritation Category2B

Environmental Hazards

Not classified

Label Elements

Symbol

None

Signal Word

None

Hazard Statement

None

Precautionary statements

Prevention

Wear protective gloves, eye and face protection, respiratory protection

Response

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 SWALLOWED: Rinse mouth. Call a doctor if you feel unwell.

Section 3: Composition/information on ingredients

Mixture

Chemical name(s)	CAS#	Concentration (% wt.)
White Portland Cement - calcium salts as listed		46.9
3CaO.SiO ₂	12168-85-3	
2CaO.SiO ₂	10034-77-2	
3CaO.Ai ₂ O ₃	12042-78-3	
4CaO.Ai ₂ O ₃ .Fe ₂ O ₃	12068-35-8	
CaSO ₄ .2H ₂ O	13397-24 -5	
Sand, crystalline silica*	14808-60-7	42.1
Acrylic polymer	n/a	6.4
Glass fiber	65997-17-3	4.0
Binder	919-30-2	0.4
Color pigments	13463-67-7	0.2 – 1.7
	57455-37-5	
	1317-61-9	
	1308-38-9	
Steel (reinforcement, if required)†	Not Assigned	0 – 5.0

* The weight percent listed is for total silica and not the respirable fraction. All silica ingredients have been bonded into these manufactured articles and are not respirable as provided. Cutting, grinding or otherwise altering these manufactured articles may produce respirable crystalline silica dust. See Section 8 for exposure details.

† The weight percent of the steel reinforcement, if any, could vary depending on structural or attachment requirements.

Section 4: First-aid measures

Inhalation	Particles or dust may cause irritation. Remove person to fresh air. Have affected person blow nose or use soft tissues to remove particles or residues from nostrils. If symptoms persist, get medical attention.
Skin contact	For skin contact or irritation, wash immediately and thoroughly with soap and water. Get medical attention if irritation develops or persists. For minor cuts or abrasions, rinse away debris with water, clean with soap and water, disinfect and bandage. Get medical attention as circumstances dictate.
Eye contact	For dust in the eyes, flush eyes immediately and thoroughly with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists or for eye abrasions.
Ingestion	Rinse mouth with water immediately. Do not induce vomiting without medical advice. If symptoms persist, get medical attention.
Most important symptoms/ effects, acute and delayed	Eye irritation. Exposed individuals may, experience eye tearing, redness and discomfort. Inhalation may cause respiratory tract irritation. Symptoms may be delayed.

Section 5: Fire-fighting measures

Suitable extinguishing media	Use water or other extinguishing measures that are appropriate to the local circumstances and environment. There is no unsuitable extinguishing media known.
Specific hazards arising from the chemical	During a fire, toxic gases and particulates (such as oxides of sulfur) may be released by the decomposition of calcium sulfate. No unusual fire or explosion hazards noted.
Special protective actions for fire-fighters	Fire-fighters should use standard fire-fighting procedures appropriate for the local circumstances and environment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

These solid manufactured articles do not represent a spill, leak or release hazard. Avoid actions that cause dust from damaged articles from becoming airborne. Avoid inhalation of dust. Wear gloves and other personal protective equipment. Refer to Section 8: Exposure controls/personal protection.

Environmental precautions

Avoid discharge into drains, sewers and other waterways.

Methods and materials for containment and cleaning up

Follow federal, state or provincial, and/or local regulations for solid waste disposal.

Section 7: Handling and storage

Precautions for safe handling

These manufactured articles can be heavy and awkward to lift and install posing risks such as sprains to the back, arms and legs. Use proper lifting and handling techniques. Wear clean gloves to protect hands from rough edges and glass fibers.

Conditions for safe storage, including incompatibilities

Protect products from weather and store indoors in a cool, dry, ventilated area from moisture. Incompatible with: acids, phosphorus, diazomethane, and aluminum (at high temperatures).

Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical name(s)	CAS#	ACGIH-11.V (mg/m3)	OSHA (mg/m3)
White portland cement	65997-15-1	1	10 (T) / 5 (R) PEL
Sand, crystalline silica	14808-60-7	0.025	4.3 (T) / 3.3 (R) TWA
Acrylic polymer	n/a	5	10 (T)
Glass fiber	65997-17-3	10	15 (T) / 5 (R) PEL
Binder	919-30-2	n/a	n/a
Color pigments	13463-67-7	10	15 (T) / 5 (R) PEL
	57455-37-5	n/a	10 (T) / 3 (R)
	1317-61-9	10	15 (T) / 5 (R)
	1308-38-9	10	15 (T) / 5 (R) PEL
Steel (reinforcement, if required)	Not Assigned	0.5	15 (T) / 5 (R) PEL

OSHA – Occupational Health and Safety Administration; PEL – Permissible Exposure limit

TWA – Time Weighted Average; (T) – Total dust; (R) – Respirable fraction

ACGIH – American Conference of Governmental Hygienists; TLV – Threshold Limit Value

Note: These manufactured articles contain crystalline silica but not in a respirable form. Cutting, grinding or similar alterations to these articles that produce dust may contain respirable crystalline silica dust which is a known lung carcinogen, and is listed in California Proposition 65 as being known to cause cancer. Take precautions to prevent and/or control dust levels, if any, to within approved limits.

Appropriate engineering controls

Normal handling and use of the manufactured articles as supplied do not create a risk of exposure beyond personal exposure limits. If cutting, grinding or other modifications are made to the manufactured articles that generate dust, take precautions to keep dust levels below permissible exposure limits through the use of portable dust collectors and/or ventilation, as needed. If necessary, use a process enclosure with adequate ventilation to contain, extract and/or collect dust.

Section 8: Exposure controls/personal protection (continued)

Individual protection measures, such as personal protection equipment

Respiratory Protection	When dust is present wear a NIOSH approved respirator that is properly fitted.
Eye/face protection	Wear appropriate safety glasses, goggles or face shields as the nature of the work dictates.
Skin Protection	Wear clean gloves when handling parts. Wear protective clothing to prevent repeated or prolonged skin contact Remove clothing and protective equipment that becomes dusty and clean before reusing.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practices.

Section 9: Physical and chemical properties

Appearance: Solid; range of colors	Explosive limits: Not applicable
Odour: Little or none	Vapour pressure: Not applicable
Odour threshold: Not applicable	Vapour density: Not applicable
pH: Not applicable	Relative Density: 6.5 -7.5 lb/ft ³ (32-37 kg/m ³)
Melting point: Not applicable	Solubility: Not applicable
Freezing point: Not applicable	Partition coefficient: Not applicable
Initial boiling point: Not applicable	Auto-ignition temperature: Not applicable
Flash point: Not applicable	Decomposition temperature: Not available
Evaporation rate : Not applicable	Viscosity: Not applicable
Flammability: Noncombustible	

Section 10: Stability and reactivity

Reactivity	Not available
Chemical stability	Stable at normal conditions
Possibility of hazardous reactions	No dangerous reaction known under normal conditions of use.
Conditions to avoid	Incompatibilities - see below.
Incompatible materials	Some ingredients have incompatibilities. Silica sand dissolves in hydrofluoric acid producing corrosive silicon tetrafluoride gas. Silicates also react with powerful oxidizers such as fluorine and chlorine trifluoride. Iron Oxide pigments are incompatible with hydrazine, calcium hypochlorite, performic acid and bromine pentafluoride.
Hazardous decomposition products	Toxic gases and particulates, calcium oxides, sulfur dioxides.

Section 11: Toxicological information

Acute	Exposure to dust may cause irritation to the eyes, skin and respiratory tract.
Skin corrosion/irritation	Dust in contact with skin can cause irritation or dry skin
Serious eye damage/eye irritation	Dust in the eyes will cause eye irritation
Skin sensitization	Not classified
Respiratory sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not expected to be hazardous by OSHA criteria

Section 11: Toxicological information (continued)

Note: Exposure to airborne respirable crystalline silica dust is listed by IARC, NTP and California Proposition 65 as a lung carcinogen known to cause cancer. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount exposure and the length of time (usually years) of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline Silica (Quartz) CAS# 14808-60-7 1 (Carcinogenic to humans)

Reproductive toxicity	Not classified
STOT single exposure	Not classified
STOT repeated exposure	Not classified
Aspiration hazard	Not classified
Chronic effects	Not hazardous under normal conditions of use

Section 12: Ecological information

These solid manufactured articles do not represent a spill, leak or accidental release hazard and not known to produce an adverse effect on ecology.

Toxicity	No data available
Persistence and degradability	No data available
Mobility in soil	No data available
Other adverse effects	Not expected to produce an adverse effect on ecology

Section 13: Disposal considerations

Disposal methods For the safety of persons conducting disposal, recycling or reclamation activities, please refer to Section 8: Exposure controls/personal protection. Treat these materials as solid waste. Do not dispose of in sewers, drainage systems or waterways. Dispose of material in accordance with federal, state or provincial, and local regulations.

Section 14: Transport information

DOT	Not regulated as dangerous goods	Transport in bulk according to Annex II of Marpol 73/78 and the IBC code	Not applicable
IATA	Not regulated as dangerous goods		
IMDG	Not regulated as dangerous goods		
TDG	Not regulated as dangerous goods		

Section 15: Regulatory information

The items that are the subject of this Safety Data Sheet fall within the scope of the definition of “manufactured articles” by United States and Canadian regulations concerning hazardous materials. The information provided pertains to the individual ingredients used to make these manufactured articles.

These manufactured articles are not subject to the Montreal protocol, Stockholm convention or the Rotterdam convention.

US California proposition 65

Note: Silica, crystalline (airborne particles of a respirable size) is listed as a chemical known to the state of California to cause cancer. The manufactured articles that are the subject of this SDS may contain crystalline silica but not in a respirable form. Performing cutting, grinding or other operations that create dust could produce airborne particles of respirable size. See Section 8: Exposure controls/personal protection

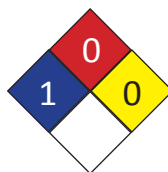
Section 16: Other information

HMIS Ratings

HEALTH	* 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	E

NFPA Ratings

Health: 1
Fire: 0
Reactivity: 0



HMIS/NFPA hazard legend:

0 = Minimal
1 = Slight
2 = Moderate
3, = Serious
4 = Severe
E = Safety glasses, gloves
and dust respirator
* = Chronic

Abbreviations

CAS	Chemical Abstracts Service	NIOSH	National Institute of Occupational Safety & Health
CPR	Controlled Products Regulations	NTP	National Toxicology Program
DOT	Department of Transportation (US)	OSHA	Occupational Health and Safety Administration
HMIS	Hazardous Materials Identification System	PEL	Permissible Exposure Limit
IARC	International Agency for Research on cancer	PPE	Personal Protective Equipment
NFPA	National Fire Protection Association	TOG	Transportation of Dangerous Goods (Cdn.)

SDS Issue date

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge as of the date issued and is typical of the articles manufactured. Some variations could be expected with custom made articles due to part size and its structural requirements, finish and support embeddings etc. The information given is provided as a guideline for safe handling, use, storage, transportation, disposal and not to be considered a warranty or quality specification. The user assumes full responsibility for applying the appropriate safety measures when these products are used.