

Manufacturer

Georgia-Pacific Gypsum Georgia-Pacific Canada
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 Atlanta, GA 30303 Mississauga, ON L5N 5S3
 Technical Service Hotline: 1-800-225-6119

Description

ToughRock® Fireguard 45® Gypsum Board has a noncombustible (per ASTM E136), dimensionally stable, gypsum core. The core is specially formulated, increasing the strength and resistance to the passage of heat. The surfacings on both facings and on the long edges are 100% recycled paper. The front facing (side to be finished) and the long edges are an ivory color; the back facing paper is gray. The ends are square cut, smooth finished with no paper facing. Georgia-Pacific ToughRock® Gypsum Board products are GREENGUARD and GREENGUARD Gold Certified for low emissions of volatile organic compounds (VOCs). They are listed in CHPS® High Performance Product Database for low emitting products.

Primary Uses

The 1/2" (12.7 mm) ToughRock Fireguard 45 Gypsum Board is a wall or ceiling covering material for use in new building construction or renovation. It is designed for direct attachment to wood or steel framing.

This product is 1/2" (12.7 mm) Type X as defined by ASTM C1396, gypsum board that provides not less than 45-minute fire resistance rating for boards 1/2" (12.7 mm) thick. It is used in select fire-rated wood-framed wall assemblies to help protect framing members from the spread of fire. With joints covered, ToughRock Fireguard 45 Gypsum Board will resist the passage of smoke. See the UL Online Certification Directory for information on fire-rated assemblies where ToughRock Fireguard 45 Gypsum Board is approved for use in the assembly.

It has also been formulated to perform like a gypsum ceiling board where improved sag resistance is desired, per ASTM C1396, section 12. It can be used on ceilings with 24" (610 mm) o.c. frame spacing when a water based texture is applied. Always seal board with a high quality latex primer before applying texture. Insulation should not exceed 2.2 lbs/sf. (9.9 km/m2).

ToughRock Fireguard 45 Gypsum Board is manufactured with an ivory paper facing designed to receive joint treatment, paint, wall covering, textured coatings or other finish treatment.

Limitations

- ToughRock Fireguard 45 Gypsum Board is a non-structural product and should not be used as a nailing base to support heavy wall-mounted objects.
- It is intended for interior applications only and it must be kept dry and not used where exposure to moisture is extreme or continuous.
- Do not use ToughRock Fireguard 45 Gypsum Board where there is prolonged exposure to temperatures exceeding 125°F (52°C) and/or continuous exposure to extreme humidity; e.g. located adjacent to wood burning stoves, heating appliances, steam rooms, showers, gang shower rooms and swimming pools.
- Consult water-based textures manufacturer's literature if they are to be used.

Applicable Standards

Manufactured to meet ASTM C1396 Sections 5 and 12.

Building Code Conformity

ToughRock Fireguard 45 Gypsum Board conforms to requirements of the current IBC and IRC codes for its intended use.

Sizes

Thickness, nominal 1/2" (12.7 mm)
 Widths, nominal 48" (1220 mm); 54" (1372 mm)
 Lengths, standard 8' (2440 mm) to 16' (4880 mm)

Edges

1/2" (12.7 mm) tapered edges.

Supplemental Materials

Fasteners: Nails or screws.

Joint System: Tape, bedding compound and topping compound.

Trims: Corner bead, edge/casing bead, control joints, floor/ceiling runners and channels.

Walls and ceiling textures.

Sealants.

Technical Data

Flame spread rating of 15 and smoke developed 0, when tested in accordance with ASTM E84. The core is noncombustible when tested in accordance with ASTM E136.

The 1/2" ToughRock Fireguard 45 is UL classified, Type FG.

Fire Resistance Ratings

ToughRock Fireguard 45 Gypsum Board meets the criteria for 1/2" (12.7 mm) Type X special fire resistance, as defined in ASTM C1396. ToughRock Fireguard 45 Gypsum Board is certified for fire-rated assemblies by UL LLC. Consult UL Fire Resistance Directory for specific assemblies where ToughRock Fireguard 45 Gypsum Board is approved for use.

Sound Control

ToughRock Fireguard 45 Gypsum Board can achieve designated Sound Transmission Class (STC) values when used in properly designed constructions.

Sound rated assemblies require sealing at top, bottom, intersections and other locations where sound leaks may develop. See the Gypsum Association Publication GA-600, Fire Resistance Design Manual, for sample sound isolation construction.

Application Standards

ToughRock Fireguard 45 Gypsum Board may be applied according to the Gypsum Association Publication GA-216 or ASTM C840 for non-fire rated construction.

For fire resistance construction application regarding board orientation, fastener type and spacing shall be consistent with the tested construction details. These details are published in the UL Online Certification Directory.

Handling and Use—Caution

This product may contain fiberglass which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

Material Safety Data Sheet

Material Safety Data Sheet (MSDS) is available upon request or online at www.buildgp.com/safetyinfo.

continued →

Submittal Approvals

Job Name _____
 Contractor _____
 Date _____

Board Decoration

ToughRock® Fireguard 45® Gypsum Board is designed to accept most types of paints, texture and wall covering materials. Georgia-Pacific Gypsum strongly recommends priming the surface with a full-bodied, quality latex primer before applying a final decorative material. Priming will equalize the suction variation between the joint compounds and the paper surface. If glossy paints are used in such areas as kitchens or bathrooms, skim coat joint compound over the entire surface to reduce highlighting or joint photographing. This method is also recommended in areas with severe natural or artificial side lighting.

Georgia-Pacific Gypsum recommends application of a sealer prior to applying wallpaper or other wall covering to the board so that the board surface will not be damaged if the covering is subsequently removed during redecorating. Joint treatment must be thoroughly dry before proceeding with primer application and final decoration. Refer to Gypsum Association Publications GA-214 and GA-216 for joint treatment and finishing recommendations.

Physical Properties

| Properties | 1/2" (12.7 mm) ToughRock® Fireguard 45® Gypsum Board |
|---|--|
| Thickness, nominal inches | 1/2" (12.7 mm), ± 1/64" (0.4 mm) |
| Width, nominal | 4' (1220 mm), - 3/32" (2.4 mm); 54" (1372 mm), - 3/32" (2.4 mm) |
| Length, standard | 8' (2440 mm) to 16' (4880 mm) ± 1/4" (6.4 mm) |
| Weight ¹ , lbs./sq. ft. nominal (kg/m ²) | 1.6 (7.8) |
| Edges | Tapered, square or tapered with round edges |
| Surfacing | 100% recycled paper face, back and long edges |
| Flexural strength ³ , min. | |
| Parallel, lbf. (N) | ≥36 (160) |
| Perpendicular, lbf. (N) | ≥107 (476) |
| R Value ² , °F·ft ² ·hr/BTU (m ² ·K/W) | 0.45 (0.08) |
| Nail Pull Resistance ³ , minimum, lbf. (N) | ≥77 (343) |
| Hardness, lbf. (N) (core, edges and ends) | ≥15 (67) |
| Humidified deflection ³ | 5/16" (8 mm) |
| Surface Burning Characteristics ⁴ (per ASTM E84) | |
| Flame Spread | 15 |
| Smoke Developed | 0 |
| (The core is noncombustible when tested in accordance with ASTM E136.) | |

¹ Represents approximate weight for design and shipping purposes. Actual weight may vary depending on manufacturing location and other factors.

² Per Gypsum Association document GA-235.

³ Specified minimum values are as defined in ASTM C1396.

⁴ Products qualify for NFPA Class A or IBC Class 1.



U.S.A. Georgia-Pacific Gypsum LLC
 Georgia-Pacific Gypsum II LLC
 Canada Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. West: 1-800-824-7503
 Midwest: 1-800-876-4746
 South Central: 1-800-231-6060
 Southeast: 1-800-327-2344
 Northeast: 1-800-947-4497

CANADA Canada Toll Free: 1-800-387-6823
 Quebec Toll Free: 1-800-361-0486

TECHNICAL INFORMATION

U.S.A. and Canada: 1-800-225-6119, www.gpgypsum.com

TRADEMARKS TOUGHROCK, FIREGUARD 45, the flame logo, GEORGIA-PACIFIC and the GP logo are trademarks owned by or licensed to Georgia-Pacific Gypsum LLC. CHPS is a trademark owned by Collaborative for High Performance Schools, Inc.

WARRANTIES, REMEDIES AND TERMS OF SALE For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.buildgpc.com/safetyinfo or call 1-800-225-6119.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.

SAFETY DATA SHEET

1. Identification

Product identifier

Product list

Paper Faced Gypsum Panels

Product List A

ToughRock® Veneer Plaster Base (Blueboard)
ToughRock® Flexroc® Gypsum Board
ToughRock® Mold-Guard™ Gypsum Board
ToughRock® Basement Board® Gypsum Board
ToughRock® Sound Deadening Gypsum Board
ToughRock® Stretch 54® Gypsum Board
ToughRock® Soffit Board

Product List B

ToughRock® Gypsum Board

Product List C

ToughRock® Span 24® Lite-Weight Ceiling Board
ToughRock® Stretch 54® Lite-Weight Gypsum Board
ToughRock® Lite-Weight Gypsum Board
ToughRock® MH Ceiling Board
ToughRock® Fireguard X® Gypsum Board
ToughRock® Fireguard 45® Gypsum Board

Product List D

ToughRock® Gypsum Sheathing
ToughRock® Span 24® Ceiling Board
ToughRock® Fireguard X® Gypsum Sheathing
ToughRock® Fireguard X® Stretch 54® Gypsum Board
ToughRock® Fireguard X® Mold-Guard™ Abuse-Resistant Gypsum
ToughRock® Fireguard X® Veneer Plaster Board
ToughRock® Fireguard X® Mold-Guard™ Gypsum Board
ToughRock® Fireguard X® Mold-Guard™ Max-Abuse Gypsum Board
ToughRock® Fireguard X® Mold-Guard™ Max-Impact Gypsum Board

Product List E

ToughRock® Shaftliner
ToughRock® Fireguard C® Soffit Board
ToughRock® Fireguard C® Stretch 54® Gypsum Board
ToughRock® Lite-Weight Fire-Rated Gypsum Board

Product List F

ToughRock® Fireguard C® Gypsum Board
ToughRock® Lite-Weight Veneer Plaster Base

Other means of identification

Product code

GP-71A

Recommended use

Products accommodate wide range of wall, floor and ceiling applications and soffit treatments.

Recommended restrictions

Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

| | | | |
|-------------------------------|---|--------------|--|
| Company name | Georgia-Pacific Gypsum LLC | | |
| Address | 133 Peachtree Street, NE Atlanta, GA 30303 | | |
| Telephone | Technical Information | 800.225.6119 | |
| | (M)SDS Request | 404.652.5119 | |
| E-mail | Not available. | | |
| Emergency phone number | Chemtrec - Emergency | 800.424.9300 | |

2. Hazard(s) identification

| | | | |
|--|---|-------------|--|
| Emergency overview | This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous by downstream activities such as cutting, sanding, or otherwise working with this product that generate large amount of dusts. Those hazards associated with large amount of dusts are described below. | | |
| Physical hazards | Not classified. | | |
| Health hazards | Eye irritation | Category 2B | |
| Environmental hazards | Not classified. | | |
| OSHA defined hazards | Not classified. | | |
| Label elements | | | |
| Hazard symbol | None. | | |
| Signal word | Warning | | |
| Hazard statement | Causes eye irritation. | | |
| Precautionary statement | | | |
| Prevention | Wash thoroughly after handling. Observe good industrial hygiene practices. | | |
| Response | Wash hands after handling. 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 advice/attention. | | |
| Storage | Store away from acids. | | |
| Disposal | Dispose of contents/container in accordance with applicable regulations. | | |
| Hazard(s) not otherwise classified (HNOC) | None known. | | |
| Supplemental information | None. | | |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------------|--------------------------|------------|---------|
| CALCIUM SULFATE DIHYDRATE | | 10101-41-4 | ≤ 95 |
| VERMICULITE**** | | 1318-00-9 | 0 - 3 |
| BORIC ACID** | | 10043-35-3 | 0.1 - 1 |
| CONTINUOUS FILAMENT GLASS FIBERS*** | | 65997-17-3 | 0.1 - 1 |
| CRYSTALLINE SILICA (QUARTZ)* | | 14808-60-7 | ≤ 0.2 |

Composition comments

** Found in products in List B, C and F, Section 1 of this SDS.

*** Found in products in List C, D, E and F, Section 1 of this SDS.

**** Found in products in List E and F, Section 1 of this SDS.

Gypsum (calcium sulfate, dihydrate) contains naturally occurring silica crystalline (quartz), which is listed as a lung carcinogen. See Section 8 for exposure information.

*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

**Testing conducted by Georgia-Pacific did not detect boric acid during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

| | |
|---|---|
| Inhalation | If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | For skin contact, wash immediately with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Do not rub the eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion | Rinse mouth. May result in obstruction and irritation if ingested. Get medical attention. |
| Most important symptoms/effects, acute and delayed | Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

| | |
|--|---|
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | Firefighters should wear full protective clothing including self contained breathing apparatus. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| | |
|--|--|
| Personal precautions, protective equipment and emergency procedures | Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Use personal protection recommended in Section 8. Keep unnecessary personnel away. |
| Methods and materials for containment and cleaning up | Minimize dust generation. Sweep up or gather material and place in an appropriate container for disposal. Utilize wet methods, if appropriate, to minimize dust. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Keep out of drains, sewers, ditches, and waterways. |

7. Handling and storage

| | |
|---|--|
| Precautions for safe handling | Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Do not breathe dust. Do not get this material in contact with eyes. Do not taste or swallow. Avoid prolonged exposure. Observe good industrial hygiene practices. Use only in well-ventilated areas. Wear appropriate NIOSH/MSHA approved dust mask or filtering facepiece if dust is generated. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking. |
| Conditions for safe storage, including any incompatibilities | Store level and keep dry. Dewpoint or other conditions causing the presence of moisture can damage the product during storage. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

Occupational exposure limits

US OSHA Table Z-3: Time Weighted Average (TWA) (mg/m3)

| Components | Type | Value | Form |
|---------------------------------|------|----------|----------------------|
| VERMICULITE**** (CAS 1318-00-9) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|---|------|------------------------|---------------------------------|
| CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4) | PEL | 5 mg/m3 | Respirable fraction. |
| CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) | PEL | 15 mg/m3 0.05 mg/m3 | Total dust. Respirable dust. |

ACGIH

| Components | Type | Value | Form |
|--|------|---------|---------------------|
| CONTINUOUS FILAMENT GLASS FIBERS*** (CAS 65997-17-3) | TWA | 5 mg/m3 | Inhalable fraction. |

US ACGIH Threshold Limit Values: Short Term Exposure Limit (STEL): mg/m3

| Components | Type | Value | Form |
|-------------------------------|------|---------|---------------------|
| BORIC ACID** (CAS 10043-35-3) | STEL | 6 mg/m3 | Inhalable fraction. |

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3, non-standard units

| Components | Type | Value | Form |
|--|------|--------------|----------------------|
| BORIC ACID** (CAS 10043-35-3) | TWA | 2 mg/m3 | Inhalable fraction. |
| CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4) | TWA | 10 mg/m3 | Inhalable fraction. |
| CONTINUOUS FILAMENT GLASS FIBERS*** (CAS 65997-17-3) | TWA | 1 fibers/cm3 | Fiber. |
| CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|--|------|---------------------|-----------------------|
| CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4) | TWA | 5 mg/m3 | Respirable. |
| CONTINUOUS FILAMENT GLASS FIBERS*** (CAS 65997-17-3) | TWA | 10 mg/m3 5 mg/m3 | Total Fiber, total |
| CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

*Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

**Testing conducted by Georgia-Pacific did not detect boric acid during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

| | |
|--|---|
| Appropriate engineering controls | Score and snap method recommended. When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Eye wash fountain is recommended. |
| Skin protection | |
| Hand protection | For prolonged or repeated skin contact use suitable protective gloves. |
| Other | Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)). |
| Respiratory protection | A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2). |
| Thermal hazards | Not applicable. |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Keep away from food and drink. |

9. Physical and chemical properties

| | |
|---|-----------------------------|
| Appearance | Paper faced gypsum boards |
| Physical state | Solid. |
| Form | Solid. |
| Color | Facing color varies |
| Odor | Odorless |
| Odor threshold | Not available. |
| pH | 7 |
| Melting point/freezing point | 2642 °F (1450 °C) estimated |
| Initial boiling point and boiling range | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not applicable |
| Flammability limit - upper (%) | Not applicable |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not applicable |
| Vapor density | Not applicable |
| Relative density | 2.2 - 2.4 g/cm ³ |
| Solubility(ies) | |
| Solubility (water) | 0.2 % @ 22°C |
| Partition coefficient (n-octanol/water) | Not applicable |
| Auto-ignition temperature | Not applicable |

| | |
|----------------------------------|----------------|
| Decomposition temperature | Not available. |
| Viscosity | Not applicable |
| Other information | |
| Flash point class | Not flammable |
| Specific gravity | 2.2 - 2.4 |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | Contact with strong acids produces carbon dioxide. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). |
| Incompatible materials | Acids. |
| Hazardous decomposition products | May include and are not limited to: calcium oxide and sulfur dioxide. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Inhalation of dusts may cause respiratory irritation. |
| Skin contact | Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. |
| Eye contact | Dust in the eyes will cause irritation. |
| Ingestion | Not applicable under normal conditions of use. May cause gastrointestinal irritation if ingested. |

Symptoms related to the physical, chemical and toxicological characteristics
Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

Information on toxicological effects

Acute toxicity

| Components | Species | Test Results |
|--|---------|-------------------|
| BORIC ACID** (CAS 10043-35-3) | | |
| <u>Acute</u> | | |
| Inhalation | | |
| LC50 | Rat | > 2 mg/l, 4 Hours |
| Oral | | |
| LD50 | Rat | 2660 mg/kg |
| CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4) | | |
| <u>Acute</u> | | |
| Oral | | |
| LD50 | Rat | > 1581 mg/kg |

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Dust in the eyes will cause irritation.

Respiratory or skin sensitization

| | |
|----------------------------------|---|
| Respiratory sensitization | Not likely to cause respiratory sensitization. |
| Skin sensitization | This product is not expected to cause skin sensitization. |

Germ cell mutagenicity Not classified.

Carcinogenicity Not expected to be hazardous by OSHA/WHMIS criteria.

Exposure to respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of respirable crystalline silica 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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

CONTINUOUS FILAMENT GLASS FIBERS*** (CAS 65997-17-3) Reasonably Anticipated to be a Human Carcinogen.

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Known To Be Human Carcinogen.

| | |
|---|---|
| Reproductive toxicity | Not classified. |
| Specific target organ toxicity - single exposure | Not classified. |
| Specific target organ toxicity - repeated exposure | Not classified. |
| Aspiration hazard | Not classified. |
| Chronic effects | Not hazardous under normal conditions of use. |
| Further information | *Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded. |

12. Ecological information

Ecotoxicity Not considered to be harmful to aquatic life.

| Components | | Species | Test Results |
|---|------|---|----------------------------------|
| BORIC ACID** (CAS 10043-35-3) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Daphnia | 766.5 mg/L, 48 Hours |
| Fish | LC50 | Razorback sucker (<i>Xyrauchen texanus</i>) | > 100 mg/l, 96 hours |
| CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4) | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) | > 1970 mg/l, 96 hours |
| CONTINUOUS FILAMENT GLASS FIBERS*** (CAS 65997-17-3) | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Zebra danio (<i>Danio rerio</i>) | > 1000 mg/l, 96 hours ECHA |
| CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Zebra danio (<i>Danio rerio</i>) | > 10000 mg/l, 96 Hours OECD SIDS |

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

| | |
|--|---|
| Disposal instructions | Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. |
| Contaminated packaging | Not available. |

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations

This product is not hazardous in the form in which it is sold and shipped by the manufacturer. However, the large amount of dusts generated by downstream activities such as cutting, sanding, or otherwise working with this product is considered hazardous and is regulated under the Hazard Communication Standard 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Cancer
lung effects
immune system effects
kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

BORIC ACID** (CAS 10043-35-3)
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

| | |
|-----------------------------|--|
| Issue date | March-13-2015 |
| Revision date | September-22-2017 |
| Version # | 03 |
| HMIS® ratings | Health: 1 Flammability: 0 Physical hazard: 0 |
| NFPA ratings | Health: 1 Flammability: 0 Instability: 0 |
| Disclaimer | This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. Employers should ensure that their employees, agents, contractors, and customers who will use the product receive adequate warnings and safe handling procedures, including a current SDS. Product users or handlers (or their employer) who are unsure of what specific precautions are required should consult their employer, product supplier, or safety or health professionals before handling or working with this product. Please notify us immediately if you believe this SDS or other safety and health information about this product is inaccurate or incomplete. |
| Revision information | Product and Company Identification: Product Codes Accidental release measures: Methods and materials for containment and cleaning up Handling and storage: Conditions for safe storage, including any incompatibilities GHS: Classification |