1. Identification

Product identifier: FireDefender® FS II (HDF) MDF

Other means of identification:
- SDS number: GP-73B
- Recommended use: Fire-rated wood veneered door frames.
- 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: MSDSREQ@GAPAC.COM
- 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
- Sensitization, respiratory: Category 1
- Sensitization, skin: Category 1A
- Germ cell mutagenicity: Category 2
- Carcinogenicity: Category 1A
- Specific target organ toxicity, repeated exposure: Category 1 (lung)

Environmental hazards: Not classified.

OSHA defined hazards: Combustible dust

Label elements:
- Signal word: Danger
- Hazard statement: May cause an allergic skin reaction. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. Causes damage to organs (lung) through prolonged or repeated exposure. If small particles of wood dust are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Precautionary statement:
- Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Observe good industrial hygiene practices. Prevent dust accumulation and airborne dispersion of dust to minimize flash fire and explosion hazard. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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 advice/attention. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Specific treatment (see section 4 on the SDS).

Storage

Store away from incompatible materials (see Section 10 of the SDS).

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SULFATE DIHYDRATE</td>
<td></td>
<td>10101-41-4</td>
<td>60 - 80</td>
</tr>
<tr>
<td>WOOD/WOOD DUST</td>
<td></td>
<td>9004-34-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>CELLULOSE</td>
<td></td>
<td>5 - 10</td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)*</td>
<td></td>
<td>14808-60-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>UREA, POLYMER WITH FORMALDEHYDE</td>
<td></td>
<td>9011-05-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>CONTINUOUS FILAMENT GLASS FIBERS</td>
<td></td>
<td>65997-17-3</td>
<td>0.5 - 1.5</td>
</tr>
<tr>
<td>METHYLENE BISPHENYL ISOCYANATE (MDI)</td>
<td></td>
<td>101-68-8</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

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

Composition comments

Gypsum (calcium sulfate, dihydrate) and vermiculite contain naturally occurring crystalline silica (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. Jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed


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

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
5. Fire-fighting measures

**Suitable extinguishing media**
- Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosive dust-air mixture.

**Unsuitable extinguishing media**
- Water. Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
- Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. 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**
- In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**General fire hazards**
- May form combustible dust concentrations in air. Wood is combustible when exposed to heat or flame. Wood dusts may form explosive mixtures with air in the presence of an ignition source. An airborne dust concentration of 40 g/m³ of air is often used as the lower explosion limit (LEL) for wood dust.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
- Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Avoid inhalation of dust during clean up. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up**
- Vacuum dust with dust ignition proof vacuum or wet sweep small wood pieces and dust; place in appropriate container for disposal. Gather larger pieces by an appropriate method. Reduce airborne dust by use of wet methods (e.g. water mist) and prevent scattering by moistening with water. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
- Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
- Dust can form an explosive mixture in air. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. If flash fire or explosion hazard is present, wear flame resistant clothing and face/head protection. Dry powders can build static electricly charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use personal protective equipment as required. Ensure dust collection systems used for conveying combustible wood dusts are protected with and equipped with fire and explosion prevention and protection equipment. See NFPA 664 and NFPA 69 for further requirements, information and guidance.

**Conditions for safe storage, including any incompatibilities**
- Store flat, supported and protected from direct contact with the ground. Store away from incompatible materials (see Section 10 of the SDS). Store in a cool dry place.

8. Exposure controls/personal protection

**Occupational exposure limits**
- The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

Material name: FireDefender® FS II (HDF) MDF

5300 Version #: 03 Revision date: November-05-2018 Issue date: May-26-2015

SDS US 3 / 10
## US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CELLULOSE (CAS 9004-34-6)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td>METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)</td>
<td>Ceiling</td>
<td>0.05 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

## US. OSHA Table Z-3 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOOD/WOOD DUST</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

## ACGIH

### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>WOOD/WOOD DUST</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

## US. ACGIH Threshold Limit Values

### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>CELLULOSE (CAS 9004-34-6)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)</td>
<td>TWA</td>
<td>1 fibers/cm³</td>
<td>Fiber.</td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)</td>
<td>TWA</td>
<td>0.005 ppm</td>
<td></td>
</tr>
</tbody>
</table>

## US. NIOSH: Pocket Guide to Chemical Hazards

### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Total</td>
</tr>
<tr>
<td>CELLULOSE (CAS 9004-34-6)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Total</td>
</tr>
<tr>
<td>CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)</td>
<td>TWA</td>
<td>3 fibers/cm³</td>
<td>Fibrous dust.</td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Fiber, total</td>
</tr>
<tr>
<td>METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)</td>
<td>Ceiling</td>
<td>0.05 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.02 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td>Dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.005 ppm</td>
<td></td>
</tr>
</tbody>
</table>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).
Georgia-Pacific Wood Products LLC voluntarily elects to adhere to exposure limits contained in OSHA's 1989 Air Contaminants Standard although certain limits were vacated in 1992. The present OSHA exposure limits governing wood dust is 15 mg/m³ (Total Dust) and 5 mg/m³ (Respirable Fraction).

Due to the fire and explosive potential of dust when suspended in air, precautions should be taken when material is used in any operation which may generate dust. Local exhaust, general dilution ventilation in enclosed areas, and explosion proof equipment is recommended. Use wet methods, if appropriate, to reduce airborne dust concentrations.

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. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

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).

General hygiene considerations
Wear appropriate thermal protective clothing (i.e. flame resistant clothing and head/face protection), when potential flash fire or explosion hazards are present.

9. Physical and chemical properties

Appearance
Wood banded composite edge banding, blocking or components

Physical state
Not available.

Form
Liquid. Powder. Solid

Color
Grey or brown

Odor
Odorless

Odor threshold
Not available.

pH
Not available.

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
Not available.

Solubility(ies)
Solubility (water) <0.2 at 22°C

Material name: FireDefender® FS II (HDF) MDF
5300 Version #: 03 Revision date: November-05-2018 Issue date: May-26-2015 SDS US 5 / 10
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not applicable
Decomposition temperature Not available.
Viscosity Not available.

Other information
- Explosive properties Not explosive.
- Flash point class Not flammable
- Oxidizing properties Not oxidizing.
- Percent volatile Not available
- Specific gravity 1 - 1.5
- VOC Not available

10. Stability and reactivity
Reactivity None known.
Chemical stability Stable at normal conditions.
Possibility of hazardous reactions Will not occur.
Conditions to avoid Keep away from heat, sparks and open flame. High temperatures. Contact with incompatible materials. Minimize dust generation and accumulation. Dust may form explosive mixture in air.
Incompatible materials Acids. Strong oxidizing agents.
Hazardous decomposition products May include and are not limited to: calcium oxide and sulfur dioxide. Thermal decomposition may emit irritating fumes or gases of carbon monoxide, carbon dioxide, aldehydes, or organic acids.

11. Toxicological information
Information on likely routes of exposure
- Inhalation May cause damage to organs through prolonged or repeated exposure by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Dust may irritate respiratory system.
- Skin contact Dust or powder may irritate the skin. May cause an allergic skin reaction.
- Eye contact Causes eye irritation.
- Ingestion Not applicable under normal conditions of use. May result in obstruction or temporary irritation of the digestive tract.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects
Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 1581 mg/kg</td>
</tr>
<tr>
<td>METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 10000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rabbit</td>
<td>0.178 mg/l</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 10000 mg/kg</td>
</tr>
</tbody>
</table>

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

Respiratory or skin sensitization

Respiratory sensitization
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
Suspected of causing genetic defects.

Carcinogenicity

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.

Wood dust generated from sawing, sanding or machining this product may cause nasal dryness, irritation, coughing and sinusitis. The International Agency for Research on Cancer (IARC), and National Toxicology Program (NTP) classifies wood dust as a carcinogen. This classification is based on the increased occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation noted insufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.

IARC Monographs. Overall Evaluation of Carcinogenicity

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) 1 Carcinogenic to humans.

METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8) 3 Not classifiable as to carcinogenicity to humans.

WOOD/WOOD DUST (CAS Not Assigned) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

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

US. National Toxicology Program (NTP) Report on Carcinogens

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

WOOD/WOOD DUST (CAS Not Assigned) Known To Be Human Carcinogen.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Causes damage to organs (lung) through prolonged or repeated exposure.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components | Species | Test Results
--- | --- | ---
CALCIUM SULFATE DIHYDRATE (CAS 10101-41-4)

Aquatic
Acute
Fish
LC50
Fathead minnow (Pimephales promelas) > 1970 mg/l, 96 hours

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

Aquatic
Acute
Fish
LC50
Zebra danio (Danio rerio) > 10000 mg/l, 96 Hours OECD SIDS

METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)

Aquatic
Acute
Fish
LC50
Fish > 1000 mg/kg, 14 days

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

Bioaccumulative potential
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 established. 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.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern

CERCLA Hazardous Substance List (40 CFR 302.4)
METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Cancer lung effects immune system effects kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

Classified hazard categories
Combustible dust
Serious eye damage or eye irritation
Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)
Chemical name: METHYLENE BISPHENYL ISOCYANATE (MDI)
CAS number: 101-68-8
% by wt.: 0.1 - 1
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
- METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)

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
California Proposition 65

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust, or use a dust mask or other safeguards for personal protection. For more information go to: www.P65Warnings.ca.gov/wood

California Proposition 65 - CRT: Listed date/Carcinogenic substance
- CRYS TALLINE SILICA (QUARTZ)* (CAS 14808-60-7) Listed: October 1, 1988
- FORMALDEHYDE (CAS 50-00-0) Listed: January 1, 1988
- WOOD/WOOD DUST (CAS Not Assigned) Listed: December 18, 2009

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
- CONTINUOUS FILAMENT GLASS FIBERS (CAS 65997-17-3)
- CRYS TALLINE SILICA (QUARTZ)* (CAS 14808-60-7)
- METHYLENE BISPHENYL ISOCYANATE (MDI) (CAS 101-68-8)

International Inventories

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<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
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*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: May-26-2015
Revision date: November-05-2018
Version #: 03

Further information
- Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

HMIS® ratings
- Health: 3*
- Flammability: 1
- Physical hazard: 0

NFPA ratings
- Health: 2
- Flammability: 1
- 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.
<table>
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<tr>
<th>Revision information</th>
<th>Identification: Recommended restrictions</th>
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<td>Composition/information on ingredients: Composition comments</td>
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<td>Exposure controls/personal protection: Occupational exposure limits</td>
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