



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Flosan Z10-90  
**Recommended use** For Industrial Use Only  
**Recommended restrictions** Users 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/Supplier information

Company name: FRC Global  
Address: 1000 N. West St.  
Suite 1200 #3008  
Wilmington, DE 19801  
Product Support/Technical Services  
Phone: (514) 931-5711  
Website [www.FRCglobal.com](http://www.FRCglobal.com)

Emergency telephone number: Corporate Office: (514) 931-5711  
Technical Services: (514) 931-5711  
Contact E-Mail: [LadleDr@FRCglobal.com](mailto:LadleDr@FRCglobal.com)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Skin Irrit. 2 Eye Irrit. 2A STOT SE 3	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
<b>Health hazards</b>	Category 1A	Carcinogenicity
<b>Environmental hazards</b>	Not classified	
<b>OSHA defined hazards</b>	Not classified	

### Label elements



**Signal word** Danger, Warning  
**Hazard Statement** H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H350 May cause cancer.

### Precautionary statement

<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection. Do not get in eyes, on skin, or on clothing
<b>Response</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If concerned: Get medical advice/attention.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations
<b>Hazard(s) not otherwise Classified (HNOC)</b>	None Known.
<b>Supplemental information</b>	Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Overexposure to the respirable dust of crystalline silica (quartz or cristobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.  Individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance

### 3. Composition/information on ingredients

Chemical Name	Common Name/Synonyms	CAS Number	
Chromium(III) oxide		1308-38-9	*
Magnesium Oxide		1309-48-4	*
Aluminum Oxide (Non-Fibrous)		1344-28-1	*
Silica		14808-60-7	*
Carbon		1333-86-4	*
Iron Oxide		1309-37-1	*
Zirconium silicate		10101-52-7	*

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Avoid contact with skin. Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Avoid contact with eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Unlikely route of exposure. If ingested in sufficient quantity and victim is conscious, give 1-2 glasses of water. Never give anything by mouth to an

unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

**Most important symptoms/effects, acute and delayed**

Direct contact with eyes may cause temporary irritation. Coughing.

**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 concerned: Get medical advice. 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 fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media**

Not available.

**Specific hazards arising from the chemical**

Not available.

**Special protective equipment and precautions for firefighters**

Wet material should be kept out of eyes and off skin in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Material does not give off toxic fumes in a fire unless molten.

## 6. Accidental release measures

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. 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**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limit**

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

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
<b>Chromium (III) oxide (CAS 1308-38-90)</b>	PEL	0.5 mg/m3	
<b>Aluminum Oxide (Non-Fibrous) (CAS 1344-28-1)</b>	PEL	5 mg/m3	Respirable fraction.
<b>Magnesium Oxide (CAS 1309-48-4)</b>	PEL	15 mg/m3	Total particulate.
<b>Carbon (CAS 1333-86-4)</b>	PEL	3.5 mg/m3	

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

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
<b>Quartz (SiO2) (CAS 14808-60-7)</b>	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

**US. ACGIH Threshold Limit Values**

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
<b>Chromium (III) oxide (CAS 1308-38-90)</b>	TWA	2 mg/m3	
<b>Magnesium Oxide (CAS 1309-48-4)</b>	TWA	10 mg/m3	Inhalable fraction.
<b>Aluminum Oxide (Non-Fibrous) (CAS1344-28-1)</b>	TWA	1 mg/m3	Respirable fraction.
<b>Carbon (CAS 1333-86-4)</b>	TWA	3 mg/m3	Inhalable fraction.
<b>Quartz (SiO2) (CAS 14808-60-7)</b>	TWA	0.025 mg/m3	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
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<b>Chromium (III) oxide (CAS 1308-38-90)</b>	TWA	0.5 mg/m <sup>3</sup>	
<b>Carbon (CAS 1333-86-4)</b>	TWA	0.1 mg/m <sup>3</sup>	
<b>Quartz (SiO<sub>2</sub>) (CAS 14808-60-7)</b>	TWA	0.05 mg/m <sup>3</sup>	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.

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection**

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary



**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.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Solid.

**Form**

Solid Powder.

**Color**

Not available.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

Not available.

**Flash point**

Not available.

Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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. Refractories containing crystalline silica may, after service, contain more or less crystalline silica. Care must be taken to avoid and/or control dust from demolition. If in doubt of the proper protection, seek advice from a safety professional.
Incompatible materials	Strong oxidizing agents. Chlorine. Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure. Contact your sales representative for clarification.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

Information on likely routes of exposure	
Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics:	Dusts may irritate the respiratory tract, skin and eyes. Coughing.
Information on toxicological effects	
Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.

<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

### **Carcinogenicity**

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

### **IARC Monographs. Overall Evaluation of Carcinogenicity**

Carbon (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Chromium (III) oxide (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.
Quartz (SiO <sub>2</sub> ) (CAS 14808-60-7)	1 Carcinogenic to humans.

### **US. National Toxicology Program (NTP) Report on Carcinogens**

Quartz (SiO <sub>2</sub> ) (CAS 14808-60-7)	Known To Be Human Carcinogen.
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### **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
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<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## **12. Ecological information**

<b>Eco toxicity</b>	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.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bio accumulative potential</b>	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

This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). 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.

#### Hazardous waste code

Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

**Waste from residues / unused products** Not available.

**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 known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA. All chemical substances in this product are listed on the TSCA chemical substance inventory where required.

#### **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.

#### **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

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

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



Reactivity Hazard – No

**SARA 302 Extremely hazardous substance** Not listed.

**SARA 311/312 Hazardous Chemical** Not listed.

**SARA 313 (TRI reporting)**

<i>Chemical Name</i>	<i>CAS number</i>	<i>% by wt.</i>
<b>Chromium (III) oxide</b>	1308-38-9 40	*
<b>Aluminum Oxide (Non-Fibrous)</b>	1344-28-1	*

**Other federal regulations**

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

Chromium (III) oxide (CAS 1308-38-9)

**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 Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

Aluminum Oxide (Non-Fibrous) (CAS 1344-28-1)

Magnesium Oxide (CAS 1309-48-4)

Carbon (CAS 1333-86-4)

Chromium (III) oxide (CAS 1308-38-9)

Quartz (SiO<sub>2</sub>) (CAS 14808-60-7)

**US. New Jersey Worker and Community Right-to-Know Act**

Aluminum Oxide (Non-Fibrous) (CAS 1344-28-1)

Magnesium Oxide (CAS 1309-48-4)

Carbon (CAS 1333-86-4)

Chromium (III) oxide (CAS 1308-38-9)

Quartz (SiO<sub>2</sub>) (CAS 14808-60-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Aluminum Oxide (Non-Fibrous) (CAS 1344-28-1)

Magnesium Oxide (CAS 1309-48-4)

Carbon (CAS 1333-86-4)

Quartz (SiO<sub>2</sub>) (CAS 14808-60-7)

**US. Rhode Island RTK**

Aluminum Oxide (Non-Fibrous) (CAS 1344-28-1)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Carbon (CAS 1333-86-4) Listed: February 21, 2003

Quartz (SiO<sub>2</sub>) (CAS 14808-60-7) Listed: October 1, 1988

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

This information is supplied to be informative and to alert the user of the material. The ultimate compliance with federal, state, and/or local regulations concerning the use of this material, or compliance with respects to products liability, rest solely upon the purchaser thereof.

**Prepared by:** FRC Global  
**Date:** October 2020

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**End of Safety Data Sheet**