

1 Identification of substance:

Product details:

- **Trade name:** **PLIVAFORM**
- **Application of the substance / the preparation:** Refractory product
- **Manufacturer/Supplier:** RHI Canada Inc.
4355 Fairview Street
Burlington, Ontario L7L 2A4
Canada
Tel 905-639-8660
- **Information department:** MSDS Technical Information
Mail: msds@rhi-ag.com
- **Emergency information:** Tel: +43 50213 5361
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2 Composition/Data on components:

Chemical characterization

- **Description:** Shaped refractory product on the basis of

69012-64-2	amorphous silica	10-20%
9005-25-8	Starch	5.0-10%
Dangerous components:		
142844-00-6	refractory ceramic fiber	80-90%

3 Hazards identification

- **Medical conditions aggravated by exposure to the product:** Asthma, chronic lung disease, and skin irritation.
- **Carcinogenicity Information:** Refractory ceramic fibers are listed by IARC as Group 2B "Possibly Carcinogenic to Humans."
- **Classification system:** The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **HMIS Classification:**

HEALTH	1	Health = *1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Protective equipment:** Wear self-contained breathing apparatus

6 Accidental release measures

- **Person-related safety precautions:** Avoid formation of dust. see section 8
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water. Keep contaminated washing water and dispose of appropriately. see section 12

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- **Measures for cleaning/collecting:** Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
- **Additional information:** See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
 - **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Decant and handle the product in dust-proof units.
 - **Information about protection against explosions and fires:** The product is not flammable
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not applicable
 - **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** Keep the working place clean. Use vacuum cleaners with filter of dust class H according to EN 60335-2-69 (up to now ZG 1/478, use category C).

· Components with limit values that require monitoring at the workplace:

69012-64-2 amorphous silica (10-20%)

EL (BC) (Canada)	4* 1.5** mg/m ³ *total; **respirable
TWAEV (ON) (Canada)	0.05 mg/m ³ (respirable)
TLV (USA)	TLV withdrawn

9005-25-8 Starch (5.0-10%)

EL (Canada)	10 mg/m ³
PEL (USA)	15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	10 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
 - **General protective and hygienic measures**
 - Keep away from foodstuffs, beverages and feed.
 - Wash hands before breaks and at the end of work.
 - Vacuum clean contaminated clothing. Do not blow or brush off contamination.
 - Avoid close or long term contact with the skin.
 - Avoid contact with the eyes and skin.
 - **Breathing equipment:**
 - **Respiratory protection**
 - NIOSH approved respirators selected in accordance with the applicable CSA Standard.Z94.4-93 should be used if dust is present.
 - A respiratory protection program should be implemented if exposure exceeds the American Conference of Governmental industrial Hygienists (ACGIH) Time Weighted Average(TWA)
Filter P100

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· **Protection of hands:**



Protective gloves.

Protective gloves

· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

- **Eye protection:** Safety glasses with side shields
- **Body protection:** Light weight protective clothing

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9 Physical and chemical properties:

· **General Information**

- **Form:** Solid in various forms
- **Color:** Light beige
- **Odor:** Characteristic

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

- **Primary irritant effect:**
- **on the skin:**

Irritant to skin and mucous membranes.

All artificial mineral fibres as well as some natural fibres can cause a slight irritation and itching or more rarely a reddening, if skin is very sensitive. Unlike other reactions to irritation, the latter is not of an allergic or chemical nature, but only due to a temporary mechanical effect.

- **on the eye:**

No irritating effect.

- **Other information (about experimental toxicology):**

Another study with rats (dose of 3, 6 and 9 mg/m³ corresponds to 25, 75 and 115 F/cm³) was completed after 29 months. Dose-dependent biological effects of ceramic fibres were observed. At all concentrations a rise in the lung cancer rate was not observed. An increased rate of pulmonary fibrosis occurred at concentrations of 6 and 9 mg/m³. Only one rat from the 9mg/m³ group was diagnosed with pleural fibrosis and a mesothelioma. No pulmonary fibroses were observed among the groups of animals with less than 9mg/m³.

Data concerning the carcinogenicity of synthetic mineral fibres (including ceramic fibres, glass wool, rockwool and slag wool) were published in 1987 by WHO-IARC. On the basis of these available data, ceramic fibres were classified as belonging to the group of substances possibly causing cancer in humans (2B).

This classification was performed on the basis of animal tests as there was no data concerning the effect of ceramic fibres on humans.

A series of inhalation toxicology tests was recently carried out on rats and hamsters with the aim of identifying the effect of ceramic fibres on health. Pulmonary damage (interstitial fibrosis), lung cancer and pleural cancer (mesothelioma) were observed in a chronic nasal inhalation study performed on rats, at a maximum dose of 30 mg/m³ (200 F/cm³).

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· **Additional toxicological information:**

Irritant
Carcinogenic if inhaled.
Irritating to eyes, respiratory system and skin.

* **12 Ecological information:**

· **Information about elimination (persistence and degradability):**

· **Other information:** This product is according to previous experiences inert and non-degradable.

* **13 Disposal considerations**

· **Product:**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Can be entirely recycled in state at time of supply.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

14 Transport information

· **DOT regulations:**

· **Hazard class:**

· **TDG class:**

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· **Maritime transport IMDG:**

· **IMDG Class:**

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· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:**

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· **Transport/Additional information:**

Not dangerous according to available informations.

* **15 Regulations**

· **National regulations**

· **WHMIS**

D2A - Very toxic material causing other toxic effects



· **Additional classification according to Decree on Hazardous Materials**

Class D - Division 2

· **Carcinogenicity categories**

· **TLV (Threshold Limit Value established by ACGIH)**

9005-25-8	Starch	A4
14808-60-7	Quartz (SiO ₂)	A2

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Risk phrases:**

May cause cancer by inhalation.
Irritating to eyes, respiratory system and skin.

· **Safety phrases:**

Do not breathe dust.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.

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In case of accident or if you feel unwell, seek medical advice immediately. If swallowed, seek medical advice immediately and show this container or label.

In case of accident by inhalation: remove casualty to fresh air and keep at rest

If swallowed, rinse mouth with water (only if the person is conscious)

· Special labeling of certain preparations:

NIOSH approved respirators selected in accordance with the applicable CSA Standard.Z94.4-93 should be used if dust is present.

A respiratory protection program should be implemented if exposure exceeds the American Conference of Governmental industrial Hygenists (ACGIH) Time Weighted Average(TWA)

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Training hints

Employees should be informed of "any use including handling of products containing ceramic fibres", "possible hazards due to exposure to fibre dust", "the restriction concerning smoking, eating and drinking in the workplace", "requirements for safety equipment and safety clothes".

Employees should be instructed "how to handle products emitting small quantities of dust, in order to limit dust emission", "on how best to use safety equipment".

· Contact:

for Canada:

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· ref.:

Hazards from the use of refractory ceramic fiber, Health and safety executive, Infoblatt, HSE 2676/(1998)

· * Data compared to the previous version altered.