



PEMION® SAFETY DATA SHEET (SDS)

**2386 East Mall - Suite 111
Vancouver, BC Canada
V6T 1Z3**

1. PRODUCT AND COMPANY INFORMATION

Product Name	:	Pemion®
Product Brand	:	Pemion® Ionomer
Product Use	:	For research and development purposes only
Product Code	:	PP1, PP2, PF1, PF2

COMPANY INFORMATION

Company Name of Supplier	:	Ionomr Innovations Inc.
Address	:	2386 East Mall - Suite 111 Vancouver, BC Canada V6T 1Z3
Telephone	:	+1.604.628.6098

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Classification	:	None
Signal Word	:	None
Pictograms and Symbols	:	None
Hazard Statements	:	None

PRECAUTIONARY STATEMENTS

- ▶ **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- ▶ **Skin:** May be harmful if absorbed through the skin. May cause skin irritation.
- ▶ **Eyes:** May cause eye irritation.
- ▶ **Ingestion:** May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This is a polymeric material. All constituents are encapsulated within the polymer system and therefore presents no likelihood of exposure under normal conditions of processing and handling.

4. FIRST AID MEASURES

- ▶ **Inhalation:** If dust from the material is inhaled, remove to fresh air.
- ▶ **Skin:** No health risks are associated with skin contact at room temperature. Wash off with soap and plenty of water.
- ▶ **Eyes:** Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation continues.
- ▶ **Ingestion:** Rinse mouth with water. Seek medical attention.

5. FIREFIGHTING MEASURES

Conditions of Flammability:

Not flammable or combustible. Material will not burn under normal conditions.

Suitable Extinguishing Media:

Use water spray, dry chemical or carbon dioxide. Material will not burn under normal conditions, so use media appropriate to surrounding materials.

Special Protective Equipment for Firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous Combustion Products:

Possible hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides, hydrogen cyanide, hydrogen iodide.

Explosion data – sensitivity to mechanical impact:

No data available.

Explosion data – sensitivity to static discharge:

No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid dust formation. Avoid breathing vapours, mist and aerosols.

Environmental Precautions:

Do not let product enter drains.

Special Protective Equipment for Firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

Methods and materials for containment:

Vacuum or sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Personal Precautions:

Personal hygiene such as washing the hands and face immediately after working with this material and before eating is recommended.

Environmental Precautions:

Keep containers tightly closed and store in a dry, ventilated space.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Chemical Name	ACGIHTLV	OSHA PEL	NIOSH REL
Particulates	10 mg/m ³	15 mg/m ³ - Total 15 mg/m ³ - Respirable	Not Determined

PERSONAL PROTECTIVE EQUIPMENT

Engineering Measures:

Provide local exhaust ventilation to keep airborne particulate concentrations below 15 mg/m³, the OSHA limit for nuisance dusts.

Personal Protective Equipment: Eyes/Face

Safety glasses with side shields.

Personal Protective Equipment: Skin

Protective clothing such as gloves, and appropriate clothing (e.g., laboratory coat) should be worn.

Personal Protective Equipment: Respiratory

Wear a NIOSH approved respirator if particulate concentrations are above published OELs.

Good industrial hygiene practice should be followed which includes preventing eye contact, minimizing skin contact and minimizing inhalation of dust, vapors or mist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	:	Brown powder with slight odor
Odor Threshold	:	No Information Available
Specific Gravity	:	1.20-1.35
Solubility in Water	:	Insoluble
VOC Content (%)	:	<1
pH	:	No data available

Melting Point/Freezing Point	:	Infusible
Vapor Pressure	:	No Information Available
Vapor Density	:	No data available
Evaporation Rate	:	No data available
Boiling Point	:	No data available
Flammability	:	Non-combustible
Flash Point	:	No data available
Explosion Data	:	LEL – No data available UEL – No data available
Auto ignition Point	:	No data available
Partition Coefficient	:	n-octanol/water, No data available
Decomposition Temperature	:	> 500 °F
Viscosity	:	No data available

10. STABILITY AND REACTIVITY

Reactivity: None.

Chemical Stability: Stable under recommended storage conditions. Not susceptible to hazardous polymerization.

Conditions to avoid: Heating to temperatures above 500 °F.

Materials to avoid: Strong oxidizing agents.

Chemical Stability: Possible hazardous decomposition products formed under fire conditions include carbon oxides, nitrogen oxides (NO_x), sulfur oxides (SO_x), monocyclic and/or polycyclic aromatic hydrocarbons, and other hydrocarbons and hydrocarbon oxidation products.

11. TOXICOLOGICAL INFORMATION

Signs and Symptoms of Overexposure: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Skin irritation signs and symptoms may include a burning sensation, redness and swelling. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

Aggravated Medical: None.

Acute Effects: Non-toxic.

Skin Corrosion/Irritation: Not irritating to the skin

Serious Eye Damage/Irritation: Particulates can be mechanically irritating to the

Ingestion: None.

Inhalation: Inhalation of particulates may produce respiratory tract irritation.

Respiratory or Skin Sensitization: Not expected to be a sensitizer.

CHRONIC EFFECTS:

Germ Cell Mutagenicity: Not expected to be a germ cell mutagen.

Carcinogenicity: Not classifiable as carcinogen to humans (group 3 IARC).

Reproductive Toxicity: There aren't known reproductive toxicity effects.

STOT-single Exposure: At dust form, may cause respiratory irritation with cough and sneezing

STOT-multiple Exposure: There aren't known repeated exposure effects.

Aspiration Hazard: No data available. Not expected to be an aspiration hazard.

► **Primary Route of Entry:** Inhalation of particulates.

12. ECOLOGICAL INFORMATION

Ecotoxicity	:	No data available.
Persistence and degradability	:	No data available.
Bioaccumulative Potential	:	No data available.
Mobility in Soil:	:	No data available.
Other Adverse Effects	:	No data available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

Not classified as hazardous for transport.

15. REGULATORY INFORMATION

SARA Section 302 & 304 : No chemicals.

SARA Section 313 : No chemicals.

This product is presently not listed on the TSCA inventory and should be used for research and development purposes only as specified in 40 C.F.R. § 720.36.

DOCUMENT CHANGE HISTORY

Document ID	Document ID
FM-7009-F	Pemion® Safety Data Sheet (SDS)

Revision	Prepared By	Approved By	Effective Date
F	Omid Toussi	Tim Peckham	July 21, 2021

This document is reviewed to ensure its continuing relevance to the systems and process that it describes.

REVISION HISTORY:

Revision	Date	Description of Changes	Approved By
A	Jan. 20, 2020	Initial Draft	Tim Peckham
B	Feb 27, 2020	Modified Regulatory Information Section	Tim Peckham
C	June 5, 2020	Change Product Code to PP1 to be consistent with quotes	Tim Peckham
D	Feb 11, 2021	Clarified Handling & Storage section.	Tim Peckham
E	Mar 11, 2021	Added new product codes.	Tim Peckham
F	July 21, 2021	Document design and general updates	Tim Peckham