

SAFETY DATA SHEET

P-LFS

CHEMICAL CODE: P-LFS

PRODUCT NAME: LAMINAR FLOW SPACER



NFPA RATING:

HEALTH HAZARD: 0 FLAMMABILITY: 0 REACTIVITY: 0 OTHER:

0=INSIGNIFICANT 1=SLIGHT 2=MODERATE 3=HIGH 4=EXTREME

1. IDENTIFICATION

Petrochem USA Identifier:
Recommended use
Recommended restrictions

P-LFS (Powder)

Laminar Flow Spacer

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
Address

Petrochem USA, Inc.

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Opa Locka, Fl. 33054

305-685-8282

Telephone

Website

www.petrochem.us

E-mail:

info@petrochem.us

In case of emergency

1-800-424-9300 (INTERNATIONAL 1-703-527-3887)

24-HOUR EMERGENCY CONTACT: CHEMTREC - COLLECT CALLS ACCEPTED

2. HAZARDS IDENTIFICATION

Physical hazards

Not classified.

Health hazards

Carcinogenicity (Category 1A)

Environmental hazards

Not classified.

OSHA defined hazards

Not classified.

Label elements



Signal word

Danger

Hazard statement

May cause cancer.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC): None known.



SAFETY DATA SHEET

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS number</u>	<u>%</u>
Silica – Crystalline, Quartz		14808-60-7	60-100%

4. First Aid Measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed: 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 exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
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.
Firefighting equipment/instructions	Use water spray to cool unopened containers.
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 & emergency procedures: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during up clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods & materials for containment and cleaning up: Stop the flow of material, if this is without risk. Avoid dust information. Avoid wetting spilled material. If vacuum sweeper is used, it must be rated to handle explosive dusts. For waste disposal, see section 13 of the SDS.

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



SAFETY DATA SHEET

7. HANDLING & 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 CONTROL/PERSONAL PROTECTION

Occupational exposure limits

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

Components	CAS#	Type	Value	Form
Silica - Crystalline, Quartz	14808-60-7	TWA	0.3 mg/m ³	Total dust.
			0.1 mg/m ³	Respirable.
			2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	CAS#	Type	Value	Form
Silica - Crystalline, Quartz	14808-60-7	TWA	0.025 mg/m ³	Respirable.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	CAS#	Type	Value	Form
Silica - Crystalline, Quartz	14808-60-7	TWA	0.05 mg/m ³	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

If contact is likely, safety glasses with side shields are recommended.

Skin/Hand protection

Wear appropriate chemical resistant gloves.

Other

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

Respiratory protection

Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

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.

SAFETY DATA SHEET

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	
Physical state	Solid.
Form	Powder.
Color	Grey/White.
Odor	Slight Odor
pH	Approx. neutral (1% solution)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 200.0 °F (> 93.3 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Flammability limit – lower (%)	28 G/m ³
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 (water)	5%
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Specific gravity	2.53

10. STABILITY & 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.
Incompatible materials	Powerful oxidizers. Chlorine.
Hazardous decomposition products	Carbon oxides. Carbon monoxide. Nitrogen oxides (NOx). Fumes.

SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

- **Inhalation** Prolonged inhalation may be harmful.
- **Skin contact** No adverse effects due to skin contact are expected.
- **Eye contact** Direct contact with eyes may cause temporary irritation.
- **Ingestion** Expected to be a low ingestion hazard.

Symptoms related to the physical, Information on toxicological effects: Coughing.

- **Acute toxicity** Not available.
- **Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.
- **Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

- **Respiratory sensitization** Not a respiratory sensitizer.
- **Skin sensitization** This product is not expected to cause skin sensitization.

Germ cell mutagenicity

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. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

Silica - Crystalline, Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Silica - Crystalline, Quartz (CAS 14808-60-7) 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** Not classified.
- Aspiration hazard** Not an aspiration hazard.
- Chronic effects** Prolonged exposure may cause chronic effects.



SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Persistence and degradability	No data is available on the degradability of this product.
Bio accumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	Not available.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.	
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)	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	



SAFETY DATA SHEET

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 Controlled Substances. CA Department of Justice Not listed.
(California Health and Safety Code Section 11100)

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

Silica - Crystalline, Quartz (CAS 14808-60-7)

US. Massachusetts RTK - Substance List

Silica - Crystalline, Quartz (CAS 14808-60-7)

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

Silica - Crystalline, Quartz (CAS 14808-60-7)

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

Silica - Crystalline, Quartz (CAS 14808-60-7)

US. Rhode Island RTK

Not regulated.

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

Silica - Crystalline, Quartz (CAS 14808-60-7) Listed: October 1, 1988

International Inventories

<u>Country(s) or regions</u>	<u>Inventory Name</u>	<u>On Inventory (Yes/No)*</u>
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States/Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*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).



SAFETY DATA SHEET

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date: 5/30/15

Version # 01

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