

SDS Reference AS4611
Version No. 1
Revision Date -
Origination Date 24/AUG/2012

Safety Data Sheet



Prepared for US/CA/EU Markets as International Trade

Product Name	PYROGEL® 2250, 3250, 6250, 9250
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SECTION 1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND COMPANY / UNDERTAKING

Product Identifier	PYROGEL® 2250, 3250, 6250, 9250		
	CAS No. Not applicable	EC No. Not applicable	Index No. Not applicable
Synonym (s)	Silica aerogel material		
REACH Registration Number	Not applicable. Aerogel insulation blankets are considered to be an article, not a substance or mixture, under the REACH Regulation.		
Relevant identified uses and uses advised against	Industrial and Professional: High performance insulation material. Consumer: Not applicable. Avoid any use: None reported.		
Details of the supplier	Aspen Aerogels, Inc. 30 Forbes Road Northborough Telephone: (508) 691-1111 MA 01532		
e-mail address	EHS@aerogel.com		
Emergency Telephone number	800-535-5053 US (INFOTRAC) 352-323-3500 INTERNATIONAL		

SECTION 2. HAZARDS IDENTIFICATION

Classification (EC 1272/2008) Product is not classified as a hazardous material.

Classification (1999/45/EC / CHIP) Product is not classified as a hazardous material.

Label Elements:

No pictogram required

Signal Word Not applicable

Hazard Statements Not applicable

Precautionary Statements Not applicable

Supplemental information None reported.

Other hazards Dust from the product when handling and in use may cause mechanical irritation to the respiratory tract, eyes and skin.
Not classified as PBT or vPvB, based on the assessment carried out according to Annex XIII of REACH regulation.

NFPA HAZARD CLASSIFICATION		HMIS HAZARD CLASSIFICATION	
Health	1	Health	1
Flammability	1	Flammability	1
Reactivity	0	Reactivity	0
Other	Not applicable	Protection	Please refer to Section 8.

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SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No	EC No	REACH Reg No	Classification	Conc'n %
*Silica gel, trimethylsilylated	126877-03-0	272-697-1	Not registered	Not classified	50-70
Oxidized polyacrylonitrile fiber	308060-39-1	-	Not registered	Not classified	30-50
Proprietary Opacifier	-	-	Not registered	Not classified	0-2

Other components are either not classified or are below the concentration limit for classification.

Balance

Further information *CONTAINS A SUBSTANCE WITH AN OCCUPATIONAL EXPOSURE LIMIT
Key to abbreviations, hazard statements and risk phrases in Section 16.

SECTION 4. FIRST AID MEASURES

Description of first aid measures	Take measures to avoid further contamination or contact. Remove contaminated clothing immediately, to be washed before reuse.
Inhalation	Remove to fresh air. Drink water to clear throat and blow nose to remove dust. If necessary seek medical advice.
Skin contact	Clean areas of skin affected with soap and plenty of water.
Eye contact	In case of contact with eyes, rinse immediately with plenty of water until irritation subsides. If necessary (e.g. irritation persists), consult an eye specialist / ophthalmologist.
Ingestion	No first aid treatment required.
Most important symptoms and effects, both acute and delayed	Irritation of the throat and upper respiratory tract, irritation of skin and eyes. Excessive inhalation of dust may aggravate pre-existing chronic lung conditions. Dermal contact may aggravate existing dermatitis.
Indication of any immediate medical attention and special treatment needed	None reported.

SECTION 5. FIRE FIGHTING MEASURES

General hazard	THE PRODUCT IS NON-COMBUSTIBLE
Extinguishing media	To suit local surroundings (e.g. water spray, carbon dioxide, foam, chemical powder)
Extinguishing media not to be used	None reported.
Special hazards arising from the substance or mixture	Decomposition products released in a fire, (e.g. oxides of carbon), should be considered toxic if inhaled. Rolls of material can retain heat within internal layers causing re-ignition in the presence of oxygen if heat is not removed.
Advice for fire-fighters	Wear self-contained breathing apparatus.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Adhere to personal protective measures.
 Minimize dust generation and ensure adequate ventilation.

Environmental precautions Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.

Methods and materials for containment and cleaning up Take up mechanically (e.g. vacuum up) into tightly closable containers. Label container and dispose of as prescribed.

Reference to other sections Section 8 – personal protective measures
 Section 13 – disposal of waste

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Handle in accordance with good hygiene and safety practice.
 Unpack material in the work area to minimize the area where dust exposure may occur.
 Pack trimmed material and scrap in disposal bags promptly.

Conditions for safe storage, including any incompatibilities Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool and dry.
 Keep product in packaging until ready for use.

Specific end use(s) Industrial and Professional:
 Ensure safe systems of work or equivalent arrangements are in place to manage risks.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters Monitoring of the workplace should be considered in accordance with Community Exposure Limits or other data as indicated below.

LTEL (TWA):	- ppm	15 mg/m ³	PEL data for silica, amorphous, total dust, OSHA
LTEL (TWA):	- ppm	5 mg/m ³	PEL data for silica, amorphous, respirable fraction, OSHA
LTEL (TWA):	- ppm	10 mg/m ³	Data for silica, amorphous, inhalable, ACGIH
LTEL (TWA):	- ppm	3 mg/m ³	Data for silica, amorphous, respirable, ACGIH
LTEL (8 hour TWA):	- ppm	6 mg/m ³	WEL data for silica, amorphous, inhalable dust EH40 (2005)
LTEL (8 hour TWA):	- ppm	2.4 mg/m ³	WEL data for silica, amorphous, respirable dust EH40 (2005)
LTEL (8 hour TWA):	- ppm	4 mg/m ³	Data for silica, amorphous, inhalable fraction, TRGS 900

Derived No Effect Levels (DNEL) not available for product or ingredients.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Predicted No Effect Concentration (PNEC) not available for product or ingredients.

Engineering controls	Provide local exhaust ventilation.
Personal protection	Observe normal standards for handling chemicals. Avoid breathing dust. Avoid eye and skin contact. Wash hands before breaks and after work. Wear personal protective equipment appropriate to the task (see below).
Personal protection	Observe normal standards for handling chemicals. Avoid breathing dust. Avoid eye and skin contact. Wash hands before breaks and after work. Wear personal protective equipment appropriate to the task (see below).
Eye protection	Safety glasses or chemical goggles
Skin protection	Nitrile gloves Disposable coveralls
Respiratory protection	Dust masks, NIOSH or CE-approved respirator or air fed visor (if ventilation is insufficient).
Other personal protection	None reported.
Environmental exposure controls	Do not allow to get into waste water or waterways.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical form	Fabric blanket
Colour	Black
Odour	Faint ammonia
Odour threshold	0.6–53ppm
Molecular weight	Not applicable
Molecular formula	Not applicable
pH	Not applicable
Melting pt / range	Not applicable
Boiling pt / range	Not applicable
Flash point	Not applicable
Relative Evaporation Rate (n-Butyl Acetate = 1)	Not applicable
General Flammability	NON-COMBUSTIBLE
Flammability/explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour Density	Not applicable

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Relative Density	Not applicable
Solubility	Insoluble in water
Partition coefficient (log P or log K n-octanol / water)	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable
Other information	None reported

SECTION 10. STABILITY & REACTIVITY

Reactivity	The product is hydrophobic and repels water.
Chemical stability	Stable under normal conditions of handling
Possibility of hazardous reactions	None reported.
Conditions to avoid	Prolonged exposure to temperatures above the recommended use temperatures.
Incompatible materials	None reported.
Hazardous decomposition products	None reported.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects	Information refers to dust that may be produced when product is used. Target organs: respiratory system, eyes, skin. Routes of exposure: inhalation, eye and skin contact.		
Acute toxicity - oral	LD ₅₀	>5,000mg/kg	Data for synthetic amorphous silica
Acute toxicity - inhalation	LC ₅₀	>2,000mg/m ³	Data for synthetic amorphous silica
Acute toxicity - dermal	LD ₅₀	>3,000mg/kg	Data for synthetic amorphous silica
Skin corrosion/irritation	Dust may cause irritation and dryness to skin.		
Serious eye damage/irritation	Dust may cause irritation and dryness to eyes.		
Respiratory sensitisation	None reported for product.		
Skin sensitisation	None reported for product.		

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SECTION 11. TOXICOLOGICAL INFORMATION

CMR effects

Carcinogenicity: Data conclusive, but not sufficient for classification.

Component	ACGIH	NTP	IARC
Amorphous silica	NA	Not Listed	3
Oxidized polyacrylonitrile fiber	NA	Not Listed	None
Proprietary Opacifier	A4	Not Listed	None

Mutagenicity: Data conclusive, but not sufficient for classification.

Reproductive toxicity: Data conclusive, but not sufficient for classification.

Single dose toxicity

No data available for product.

Repeated dose toxicity

No data available for product

Aspiration hazard

None reported.

Adverse health effects and symptoms

Inhalation of excessive amounts of dust from the product may cause mechanical irritation to the respiratory tract including, but not limited to, bronchitis, emphysema, and asthma. Dermal contact may aggravate existing dermatitis.

Other information

None reported.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Product is insoluble and inert.

Fish, acute

LC₅₀ (*Danio rerio*) >10,000 mg/l/96H Data for synthetic amorphous silica

Fish, chronic

No data available for product.

Invertebrates

EC₅₀ (*Daphnia magna*) >10,000 mg/l/24H Data for synthetic amorphous silica

Algae

No data available for product.

Soil organisms

No data available for product.

Micro-organisms

No data available for product.

Other organisms

No data available for product.

Persistence and degradability

Not applicable for inorganic material.

Bioaccumulative potential

None expected due to insoluble nature of product.

Mobility in soil

None expected due to insoluble nature of product.

Results of PBT and vPvB assessment

Not classified, based on the assessment carried out according to Annex XIII of REACH regulation.

Other adverse effects

None reported.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

In accordance with national (i.e. Hazardous Waste Regulations) and local authority regulations. Avoid generation of dust and use appropriate control measures (see Section 8). Do not allow to get into waste water or waterways.

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SECTION 14. TRANSPORT INFORMATION

Land transport (ADR/RID) The product is not classified for transport.

UN number

UN proper shipping name

Transport hazard class(es)

Packing group

Environmental hazards

Special precautions for user

Emergency action code

Hazard Identification Number

Marine transport (IMDG) The product is not classified for transport.

UN number

UN proper shipping name

Transport hazard class(es)

Packing group

Environmental hazards

Special precautions for user

Air transport (ICAO/IATA) The product is not classified for transport.

UN number

UN proper shipping name

Transport hazard class(es)

Packing group

Environmental hazards

Special precautions for user

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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for product

US:
Toxic Substances Control Act (TSCA)
Comprehensive Response Compensation, and Liability Act (CERCLA)
Superfund Amendments And Reauthorization Act (SARA)
Canada:
Canadian Environmental Protection Act (CEPA)
Workplace Hazardous Materials Information System (WHMIS)
Europe:
Classification, Labelling and Packaging Regulation (EC) 1272/2008
United Kingdom:
Chemicals (Hazard Information and Packaging) for Supply Regulations 2009 (CHIP4)

Federal Regulations (US)

TSCA (Toxic Substances Control Act) Section 8b – Inventory Status:
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
TSCA (Toxic Substances Control Act) Section 12b – Export Notification:
All chemicals comprising this product are not subject to TSCA Section 12b export notification.
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)
Product is not classified as hazardous or reportable under this requirement.
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
Product is not classified as hazardous or reportable under this requirement.
Section 311/312 HAZARD CATEGORIES
Materials in this product are classified as hazardous or reportable under this requirement.

State Regulations (US)

Section 313
Materials in this product are classified as hazardous or reportable under this requirement.
Materials in this product appear on the following state hazardous substance lists:
CA, IN, KY, MA, MN, NC, NJ, OR, PA. Check individual state requirements.
California Proposition 65
This product does not contain a chemical known to the state of California to cause cancer:

Chemical	CAS No	% Wt
None	Not applicable	Not applicable

International Regulations (Canada)

Controlled Products Regulations
This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.
Canadian Domestic Substance List (DSL)
All chemical substances in this product are exempt from, or included on, the Domestic Substances List.

WHMIS Ingredient Disclosure List

Chemical	CAS No.	% Wt
Amorphous silica	7631-86-9	≥1

WHMIS Classifications

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and is not a controlled material.

International Regulations (Europe and UK)

This product is not classified as a dangerous mixture as defined in the Classification, Labelling and Packaging Regulation (EC) 1272/2008 and the Chemicals (Hazard Information and Packaging) for Supply Regulations 2009 (CHIP4).

Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

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SECTION 16. OTHER INFORMATION

Key to abbreviations and acronyms	1999/45/EC	EU Dangerous Preparations Directive
	ACGIH	American Conference of Governmental Industrial Hygienists, Inc. (US)
	ADR	European agreement governing the international carriage of dangerous goods by road
	CAS No	Chemical Abstracts Service Registry Number
	CHIP 4	The Chemical (Hazard Information and Packaging for Supply) Regulations 2009
	CLP	Classification, Labelling and Packaging Regulation (EC) 1272/2008
	CMR	Carcinogen, Mutagen, Reprotoxin
	DNEL	Derived No Effect Level
	EC ₅₀	Concentration of a material that induces a 50% effect in the test subjects
	EC No	European Inventory of Chemical Substances number
	ECHA	European Chemicals Agency
	EH40 (2005)	HSE's list of Workplace Exposure Limits, as updated and amended
	GHS	Globally Harmonised System for classification and labelling chemicals
	HMIS	Hazardous Materials Identification System
	HSE	Health and Safety Executive (UK)
	IARC	International Agency for Research on Cancer
	LC ₅₀	Concentration of a material in air that kills 50% of the test subjects
	LD ₅₀	Amount of a solid or liquid material that kills 50% of test subjects
	LTEL	Long Term Exposure Limit
	µg/l	micrograms per litre
	mg/kg	milligrams per kilogram
	mg/l	milligrams per litre
	mg/m ³	milligrams per cubic metre
	NFPA	National Fire Protection Association
	NIOSH	The National Institute for Occupational Safety and Health (US)
	NTP	National Toxicology Program
	OSHA	Occupational Health & Safety Administration (US)
	PBT	Persistent, Bioaccumulative and Toxic
	PEL	Permissible Exposure Limit
	PNEC	Predicted No Effect Concentration
	REACH	Registration, Evaluation and Authorisation of Chemicals Regulation (EC) 1907/2006
	STEL	Short Term Exposure Limit
	STP	Sewage Treatment Plant
	TLV	Threshold Limit Value
	TRGS	Technischen Regeln für Gefahrstoffe (Technical Rules for Hazardous Substances, Germany)
	TWA	Time Weighted Average
	vPvB	very Persistent, very Bioaccumulative
	WEL	Workplace Exposure Limit
	WHMIS	Workplace Hazardous Materials Identification System

Sources of data REACH Registration dossier, suppliers' Safety Data Sheets, EH40(2005), TRGS, ACGIH, OSHA

Methods used to evaluate information used for classification Annex I, Classification, Labelling and Packaging Regulation (EC) 1272/2008

Key to Hazard Statements in Section 3 Not applicable

Key to Risk Phrases in Section 3 Not applicable

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SECTION 16. OTHER INFORMATION

DISCLAIMER: The information herein is presented in good faith and believed to be accurate as of the effective data given. However, no warranty, expressed or implied, is given. Users are urged to consult the primary documents referenced here and evaluate them for relevance to their actual use of the product. It is the users' responsibility to ensure that their activities comply with applicable Federal, State or Provincial, and local laws.

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