

1. Identification

Product identifier	Kraton™ D Milled Polymers (SIS)
Other means of identification	
SDS number	14424
Product code	D1114 PSM, D1119 PSM, D1161 PTM, D1163 PTM
Synonyms	Suffixes designate location of manufacture, dusting agent, product form * The Nanoform statement and information regarding Silica, amorphous which is listed in Sections 1 and 3 are applicable ONLY when these grades contain silica as a dusting agent (2nd suffix S). * Synthetic amorphous silica is a nanostructured material according to the definition of ISO TS 80004-1 and as defined in Regulation 2011/696/EU, as amended. * The silica dusting agent is composed of primary particles with a median size < 100 nm which are present as aggregates and agglomerates with a mean diameter scale range
Recommended use	Thermoplastic Elastomers for Advanced Materials, Adhesives, Sealants & Coatings, and Paving & Roofing.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
CORPORATE OFFICE	
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CHEMTREC - International:	+1 703 527 3887
SGS ECLN:	+32 35 75 03 30
Supplier	Not available.

2. Hazard identification

Physical hazards	Not classified.
Health hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.

Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Keep away from heat/sparks/open flames and hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.
Response	Not available.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Supplemental information	None.
Other hazards	May form combustible dust concentrations in air. Static charge accumulation potential.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Styrene-Isoprene-Styrene Polymer (SIS)		25038-32-8	<100
Silica, amorphous		7631-86-9	<5

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes. Prolonged contact may cause dryness of the skin.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. No specific antidotes are recommended.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Apply extinguishing media carefully to avoid creating airborne dust.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	High concentration of airborne dust may form explosive mixture with air. Static charges generated by emptying package in or near flammable vapour may cause flash fire. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Wear suitable protective equipment. Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid dust formation. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Keep away from sources of ignition - No smoking. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.
	Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.
	Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Environmental precautions

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

7. Handling and storage**Precautions for safe handling**

Minimise dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Static electricity and formation of sparks must be prevented. Maintain a fire watch if material reaches 225°C (437°F). Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store indoor. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. To maintain product quality, do not store in heat or direct sunlight. Keep in a cool, well-ventilated place. Store in original tightly closed container. Keep containers closed when not in use. Store at ambient temperature and atmospheric pressure. Guard against dust accumulation of this material. Use care in handling/storage. Do not stack Flexible Intermediate Bulk Containers (FIBCs) or palletised bags. Avoid storage under pressure or at elevated temperatures to minimise particulate clustering. Do not store outside. Care should be taken when storing and handling this product. Apart from the specific nature of the polymer product, conditions such as humidity, sunlight and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletised bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions.

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Additional components	Type	Value	Form
Talc	TWA	2 mg/m3	Respirable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Total
Additional components	Type	Value	Form
Dust	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Total
Talc	TWA	2 mg/m3	Respirable particles.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.
Additional components	Type	Value	Form
Dust	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.
Talc	TWA	2 mg/m3	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Additional components	Type	Value	Form
Talc	TWA	2 mg/m3	Respirable fraction.

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	TWA	3 mg/m ³	Respirable.
		10 mg/m ³	Inhalable

Additional components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable.
		10 mg/m ³	Inhalable
Talc	TWA	2 mg/m ³	Respirable.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Additional components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.
Talc	TWA	2 fibers/cc	
		2 mg/m ³	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	TWA	10 mg/m ³	Total dust.
Additional components	Type	Value	Form
Dust	TWA	10 mg/m ³	Total dust.
Talc	TWA	2 mg/m ³	Respirable dust.

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	15 minute	6 mg/m ³	Respirable fraction.
		20 mg/m ³	Inhalable fraction.
Additional components	Type	Value	Form
Dust	15 minute	6 mg/m ³	Respirable fraction.
		20 mg/m ³	Inhalable fraction.
Talc	15 minute	6 mg/m ³	Respirable fraction.
		20 mg/m ³	Inhalable fraction.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. Evaluate the need of classified electrical equipment. Prevent electrostatic charge build-up by using common bonding and grounding techniques.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Gloves are recommended for prolonged use. When handling hot material, use heat resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Dust Mask.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. 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	Ground/Powder
Colour	White.

Odour Odourless.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not applicable.

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) The product is not flammable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable.

Explosive limit - lower (%) temperature Not applicable.

Explosive limit – upper (%) Not applicable.

Explosive limit - upper (%) temperature Not applicable.

Vapour pressure Not available.

Vapour density Not available.

Relative density > 0.88 - < 0.95

Solubility(ies)

Solubility (water) Insoluble

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Dust explosion properties

Kst <200 bar.m/s Kst = 1

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 Risk of self-heating and self-ignition under long term exposure to high temperatures. No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from heat, sparks and open flame. Minimise dust generation and accumulation. Avoid exposure to high temperatures or direct sunlight.

Incompatible materials Strong oxidising agents.

Hazardous decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation Inhalation of vapours/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. Inhalation of dusts may cause respiratory irritation.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Health injuries are not known or expected under normal use. Dust in the eyes will cause irritation.

Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
Information on toxicological effects	
Acute toxicity	Not classified.
Styrene-Isoprene-Styrene Polymer (SIS)	USP Systemic Toxicity Study in Mice – Extract; No significant and/or relevant adverse effects reported.; for a representative substance.
Skin corrosion/irritation	Not classified.
Irritation Corrosion - Skin	
Styrene-Isoprene-Styrene Polymer (SIS)	USP Intracutaneous Study in Rabbits – Extract; for a representative substance. Result: Negative.
Serious eye damage/eye irritation	No data available.
Respiratory or skin sensitisation	
Respiratory sensitisation	No data available.
Skin sensitisation	Not classified.
Sensitisation	
Styrene-Isoprene-Styrene Polymer (SIS)	Tests for irritation and skin sensitization, for a representative substance. Result: Negative. Notes: ISO 10993-10 Guinea Pig Maximization Sensitization Test
Germ cell mutagenicity	Not classified.
Mutagenicity	
Styrene-Isoprene-Styrene Polymer (SIS)	In Vitro Bacterial Mutagenicity Study in E.Coli and S.Typhimurium from extract, for a representative substance. Result: Negative.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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.
Further information	
Styrene-Isoprene-Styrene Polymer (SIS)	Cytotoxicity Study using the Colony Assay in Chinese Hamster Lung Cells (V79); No significant and/or relevant adverse effects reported.; for a representative substance. In Vitro Haemolysis Study in Red Blood Cells, Japanese MHLW; No significant and/or relevant adverse effects reported.; for a representative substance. USP Muscle Implantation Study in Rabbits – 7 Day; No significant and/or relevant adverse effects reported.; for a representative substance.

12. Ecological information

Ecotoxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components	Species	Test Results
Styrene-Isoprene-Styrene Polymer (SIS) (CAS 25038-32-8)		
Aquatic		
<i>Acute</i>		
Fish	LC50 Rainbow trout	> 1000 mg/l, 96 hr

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Not inherently biodegradable.

Bioaccumulative 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.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Not applicable.

14. Transport information

TDG

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 available.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

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Further information Consider use of US NFPA Standard 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of combustible Particulate Solids", UK HSE Guidance HSG 103, Approved Codes of Practice for Explosive Atmospheres under ATEX Directive 1999/92/EC for worker protection and ATEX Directive 94/9/EC regulating equipment and protection systems used in potential explosive atmospheres

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Revision information

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