SAFETY DATA SHEET

1. Identification

Product identifier **Kraton™ D Polymers (SIS)**

Other means of identification

SDS number 14316

Product Code D0233, D1107, D1111, D1113, D1114, D1117, D1119, D1124, D1126, D1161, D1162, D1163, D1164, D1165, D1183, D1193

Synonyms This SDS covers all alphanumeric suffixes for the following products. Suffixes designate location of manufacture, dusting agent, product form. * This SDS IS NOT for milled grades (3rd suffix M) * The Nanoform statement and Silica, amorphous information 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 above 100 nm in the dusting agent used.

Recommended use Industrial use

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

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2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word	None.
Hazard statement	Not applicable.
Precautionary statement	
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Hazard(s) not otherwise classified (HNOC)	Static charge accumulation potential.
Supplemental information	None.

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	<1

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, dry chemical, carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	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	Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	If spilled, may cause a slipping hazard. Avoid dust formation. Wear appropriate personal protective equipment. Keep away from sources of ignition - No smoking. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. The product is immiscible with water and will spread on the water surface.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Minimize dust generation and accumulation. Avoid heat, sparks, open flames and other ignition sources. Do not smoke. Static electricity and formation of sparks must be prevented. Ground container and transfer equipment to eliminate static electric sparks. Maintain a fire watch if material reaches 225°C (437°F). Avoid contact with hot material. Do not breathe dust from this material. 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 palletized bags. Avoid storage under pressure or at elevated temperatures to minimize 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 palletized bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Additional components	Type	Value	Form
Kaolin	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Silica, amorphous (CAS 7631-86-9)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		0.8 mg/m3	

Additional components	Type	Value	Form
Kaolin	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Talc	TWA	0.1 mg/m3	Respirable.
		20 mppcf	
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values (TLV)

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

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Silica, amorphous (CAS 7631-86-9)	IDLH	3000 mg/m3

Additional components	Type	Value
Talc	IDLH	1000 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
Silica, amorphous (CAS 7631-86-9)	TWA	6 mg/m3

Additional components	Type	Value	Form
Kaolin	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Talc	TWA	2 mg/m3	Respirable.

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.

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 and gloves.
Respiratory protection	If ventilation is insufficient, suitable respiratory protection must be provided.
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.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Dense Pellet.
Color	Clear. or White. ~ Light yellow
Odor	Odorless.
Odor 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. Not applicable.
Explosive limit - lower (%) temperature	Not applicable.
Explosive limit - upper (%)	Not applicable. Not applicable.
Explosive limit - upper (%) temperature	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	> 0.88 - < 0.95 at 20°C
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	
Explosive properties	Not explosive.
Oxidizing properties	Not available.

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	Avoid exposure to high temperatures or direct sunlight.
Incompatible materials	Strong acids, alkalies and oxidizing 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 vapors/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. Fumes released during thermal processing may cause eye 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 sensitization

Respiratory sensitization No data available.

Skin sensitization Not classified.

Sensitization

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.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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			
Acute			
Fish	LC50	Rainbow Trout	> 1000 mg/l, 96 hr

Persistence and degradability Not inherently biodegradable.

Bioaccumulative potential The product is not bioaccumulating.

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

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 available.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) All components are either listed on the US EPA TSCA Inventory list and designated as “active” or are exempt from listing.

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 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

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.

16. Other information, including date of preparation or last revision

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NFPA ratings Health: 0
Flammability: 1
Instability: 0

NFPA ratings

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