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Form #: STI-002

Date: revision 010 04/14/2020

Section 1. PRODUCT IDENTIFICATION

Product Identifiers: Product Name: Silica Gel; CAS number: 7631-86-9

Product Part Numbers

10100, 10300, 10400, 10600, 10800, 10810, 10820, 10830, 10840, 10850, 10860, 10910, 10920, 10930, 10940, 10950, 11305, 11310, 11315, 11510, 11520, 11546, 11547, 11610, 11620, 11630, 11640, 11650, 11660, 14400, 20930, 21000, 22000, 23000, 23110, 23210, 30930M, 30940, 40400, 40405, 40410, 40930, 40930M, 40930M85, 40931ACT, 40940, 40940M, 40950M, 42545, 47070, 50C00, 51600, 52200, 52300, 52500, 52500AW, 52500M, 52500MHA, 52546M, 52560, 52565, 52566, 52700, 52900, 53700, 53900, 62500, 62516, 62526, 62546, 62560, 62565, 62570, 62577, 62580, 62585, 62590, 62591, 62595, 62596, 62700, 62716, 62726, 62746, 62760, 62765, 62770, 62777, 62780, 62785, 62790, 62791, 62795, 62796, 63500, 63516, 63526, 63546, 63548, 63554, 63555, 63560, 63565, 63570, 63577, 63580, 63585, 63590, 63591, 63595, 63596, 63700, 63716, 63726, 63746, 63754, 63760, 63765, 63770, 63777, 63780, 63790, 63791, 63795, 63796, 63554, 64554, 64754, 64900, 65700, 65900, 66500, 66516, 66526, 66546, 66554, 66555, 66560, 66565, 66570, 66577, 66580, 66590, 66591, 66595, 66596, 66700, 66716, 66726, 66746, 66754, 66760, 66756, 66770, 66777, 66780, 66790, 66791, 66795, 66796, 67500, 67516, 67526, 67546, 67554, 67560, 67565, 67570, 67577, 67580, 67590, 67591, 67595, 67596, 67700, 67716, 67726, 67746, 67754, 67760, 67765, 67770, 67777, 67780, 67790, 67791, 67795, 67796, 68500, 68516, 68526, 68546, 68554, 68560, 68565, 68570, 68577, 68580, 68590, 68591, 68595, 68596, 68700, 68716, 68726, 68746, 68754, 68760, 68765, 68770, 68777, 68780, 68790, 68791, 68795, 68796, 69500, 69516, 69526, 69546, 69554, 69560, 69565, 69570, 69577, 69580, 69590, 69591, 69595, 69596, 69700, 69716, 69726, 96746, 69754, 69760, 69765, 69770, 69777, 69780, 69790, 69791, 69795, 69796, 72000B, 72200, 72216, 72226, 72246, 72255, 72260, 72265, 72270, 72277, 72280, 72290, 72291, 72295, 72296, 72300, 72316, 72326, 72346, 72355, 72360, 72365, 72370, 72377, 72380, 72390, 72391, 72395, 72396, 72400, 72416, 72426, 72446, 72455, 72460, 72465, 72470, 72477, 72480, 72490, 72491, 72495, 72496, 72724B46, 72500, 72600, 72616, 72626, 72646, 72654, 72660, 72665, 72670, 72677, 72680, 72690, 72691, 72695, 72696, 72946, 73200, 73216, 73226, 73246, 73255, 73260, 73265, 73270, 73277, 73280, 73290, 73291, 73295, 73296, 73300, 73316, 73326, 73346, 73355, 73360, 73365, 73370, 73377, 73380, 73390, 73391, 73395, 7396, 73400, 73416, 73426, 73446, 73455, 73460, 73465, 73470, 73477, 73480, 73490, 73491, 73495, 73496, 73546, 73547, 73600, 73616, 73626, 73646, 73647, 73648, 73652, 73654, 73660, 73665, 73670, 73677, 73680, 73690, 73691, 73695, 73696, 74200, 74216, 74226, 74246, 74255, 74260, 74265, 74270, 74277, 74280, 74290, 74291, 74295, 74296, 74300, 74316, 74326, 74346, 74355, 74360, 74365, 74370, 74377, 74380, 74390, 74391, 74395, 74396, 74400, 74416, 74426, 74446, 74455, 74460, 74465, 74470, 74477, 74480, 74490, 74491, 74495, 74496, 74600, 74616, 74626, 74646, 74654, 74655, 74660, 74665, 74670, 74677, 74680, 74690, 74691, 74695, 74696, 75200, 75216, 75226, 75245, 75246, 75255, 75260, 75265, 75270, 75296, 75300, 75316, 75326, 75346, 75355, 75360, 75365, 75370, 75396, 75400, 75416, 75426, 75446, 75455, 75460, 75465, 75470, 75496, 75546, 75600, 75616, 75626, 75646, 75654, 75660, 75665, 75670, 75696, 76200, 76216, 76226, 76246, 76255, 76260, 76265, 76270, 76277, 76280, 76290, 76291, 76295, 76296, 76300, 76316, 76326, 76346, 76348, 76355, 76355C, 76360, 76365, 76370, 76377, 76380, 76390, 76391, 76395, 76396, 76400, 76416, 76426, 76446, 76455, 76460, 76465, 76470, 76477, 76480, 76490, 76491, 76495, 76496, 76500, 76548, 76600, 76616, 76626, 76626C, 76646, 76654, 76655, 76660, 76665, 76670, 76677, 76680, 76690, 76691, 76695, 76696, 77200, 77216, 77226, 77246, 77255, 77260, 77265, 77270, 77277, 77280, 77290, 77291, 77295, 77296, 77300, 77316, 77326, 77346, 77355, 77360, 77365, 77370, 77377, 77380, 77390, 77391, 77395, 77396, 77400, 77416, 77426, 77446, 77455, 77460, 77465, 77470, 77477, 77480, 77490, 77491, 77495, 77496, 77600, 77616, 77626, 77646, 77654, 77655, 77660, 77665, 77670, 77677, 77680, 77690, 77691, 77695, 77696, 78200, 78216, 78226, 78246, 78255, 78260, 78265, 78270, 78277, 78280, 78290, 78291, 78295, 78296, 78300, 78316, 78326, 78346, 78355, 78360, 78365, 78370, 78377, 78380, 78390, 78391, 78395, 78396, 78400, 78416, 78426, 78446, 78455, 78460, 78465, 78470, 78477, 78480, 78490, 78491, 78495, 78496, 78600, 78616, 78626, 78646, 78654, 78655, 78660, 78665, 78670, 78677, 78680, 78690, 78691, 78695, 78696, 79200, 79216, 79226, 79246, 79255, 79260, 79265, 79270, 79277, 79280, 79290, 79291, 79295, 79296, 79300, 79316, 79326, 79346, 79355, 79360, 79365, 79370, 79377, 79380, 79390, 79391, 79395, 79396, 79400, 79416, 79426, 79446, 79455, 79460, 79465, 79470, 79477, 79480, 79490, 79491, 79495, 79496, 79600, 79616, 79626, 79646, 79654, 79655, 79660, 79665, 79670, 79677, 79680, 79690, 79691, 79695, 79696, 98000, 452546M, 452954, 453546, 10301500, 10301546, 10302000, 10302016, 10302026, 10302046, 10302049, 10302050, 10302055, 10302070, 10303000, 10303016, 10303026, 10303046, 10303047, 10303048, 10303055, 10303070, 10303095, 10304027, 10304046, 10304047, 10304052, 10304070, 10352000, 10352049, 10353000, 10353046, 10353049, 10403000, 10403046, 10501500, 10502000, 10502016, 10502046, 10502055, 10503000, 10503016, 10503026, 10503046, 10504026, 10504046, 10504070, 15355800, 15456300.

Synonyms: Amorphous silica, Silica gel, Porous form of Silicon dioxide

Recommended use: Chromatography, Laboratory chemicals

Uses advised against: No information available

Details of the Supplier of the Safety Data Sheet:

Company: Sorbent Technologies

5955 Peachtree Corners East
Norcross, GA 30071 USA

Emergency Telephone Number: 1-866-767-2832

Section 2. HAZARD IDENTIFICATION

United States: According OSHA 29 CFR 1910.1200 HCS

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Classification of the Substance or Mixture including Precautionary Statements:

Based on available data, the classification criteria are not met.

Emergency Overview: Odorless white powder.

Potential Health Effects: Medical conditions aggravated by exposure: Not expected to be a health hazard.

Response:

Eyes: Not classified.

Skin: Not classified.

Ingestion: Not classified.

Inhalation: Not classified.

Chronic Effects: No adverse effects expected.

Carcinogenic Effects: IARC: Not listed NTP: Not listed OSHA: Not regulated

GHS Label Elements:

Hazard symbol: None

Signal Word: None

Hazard statement: This does not meet the criteria for classification.

Precautionary Statement:

Prevention P261: Avoid breathing dust/fume.

P264: Wash thoroughly after handling

Response P314: IF IN EYES: Irrigate for 15 minutes.

P304: IF INHALED: Remove to fresh air.

Storage P402: Store in a dry place.

P404: Store in closed container.

Disposal P501: Dispose of waste and residues including containers in accordance with local authority requirements.

Other Hazards Not Otherwise Classified (HNOC): None identified

Supplemental Information: None

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization:

Chemical characteristics, Amorphous silica gel

Ingredient	CAS No.	EC No.	%
Amorphous silica gel	7631-86-9, or 63231-67-4, or 112926-00-8	231-545-4	>99% (w/w)

Synonyms: Amorphous Silica Gel, Amorphous Silicon Dioxide, Reversed Phase (RP) Silica Gel, Bonded Phase Silica Gel

Note: This is not the same as crystalline silica.

Formula: SiO₂.H₂O

Molecular weight: 60.08 g/mol.

Hazardous Impurities: None known

Section 4. FIRST AID MEASURES

Description of First Aid Measures

Skin: Wash material off skin with soap and water. Seek medical attention if irritation occurs.

Eyes: Flush with copious amounts of water for 15 minutes. Seek medical attention if irritation occurs.

Ingestion: Give one or two glasses of water to drink. Seek medical attention if gastrointestinal symptoms develop.

Inhalation: Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.

Most Important Symptoms and Effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

General Information: Ensure that medical personnel are of materials involved, and take precautions to protect themselves

Section 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: This product is not combustible, use extinguish agents for surrounding fire.

Unsuitable Extinguishing Media: Not applicable

Flash Point: Not applicable

Non-flammable: OSHA Method 16CFR1500.44 (Incorporated by reference in 29CFR1920.1200).

Specific Hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Flammability Limits in Air: LFL and UFL Not Applicable.

Auto-ignition temperature: Not available

Protective Equipment and precautions for firefighters:

Fire Fighting Equipment: Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

Protection of fire-fighters:

Fire Fighting Instructions: In the event of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Wear self-contained breathing apparatus and protective clothing.

General fire hazards: The product is not flammable. Do not breathe fumes.

Specific methods: Use standard firefighting procedures and consider the hazards of other involved materials.

NFPA rating: Health: 1, Flammability: 0, Reactivity: 0,

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental Precautions

No special environmental precautions required.

Methods and Material for Containment and Clean-up

If a Spill or Leak Occurs: Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices. These practices include avoiding unnecessary exposure, and removal from eyes, skin, and clothing. Prevent product from entering drains.

Disposal Method: Sweep up and shovel into suitable containers for disposal. Dispose in a facility for non-hazardous wastes. Spent should be disposed of in accordance with State and Federal laws.

Container Disposal: Do not reuse empty bags or drums. Dispose of used bags in facility permitted for non-hazardous wastes.

Section 7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Use in an area provided with appropriate exhaust ventilation. Avoid prolonged contact with eyes and skin. Do not breathe dust. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling.

Conditions for Safe Storage, Including any Incompatibilities

Storage: Room temperature. Store in cool, dry, ventilated area and in closed containers. Keep away from oxidizers, heat or flames. Store away from ignition sources. Do not store above 24 deg. C. Strongly hygroscopic..

Storage class (TRGS 510): Non-combustible Solids

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region regulatory bodies.

Component	OSHA PEL	ACGIH TLV	NIOSHI DLH
Amorphous silica gel (7631-86-9)	80 mg/m ³	TWA 3 mg/m ³ respirable 10 mg/m ³ inhalable (silica, amorphous withdrawn in 2006)	

Component	Canada Quebec	Canada Ontario TWAEV	Mexico OEL (TWA)
Silica, amorphous (7631-86-9)	TWA: 6 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³

ACGIH is the American Conference of Governmental Industrial Hygienists

OSHA is the Occupational Safety and Health Administration

NIOSH is the National Institute of Occupational Safety and Health

PEL is the Permissible Exposure Limits established by OSHA.

TLV is the Threshold Limit Value a term ACGIH uses to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

MSHA is the Mine Safety and Health Administration

Exposure Controls

Engineering Controls: Use local exhaust to control emissions near the source. Ventilation systems should be configured to prevent exceeding the recommended or regulated exposure limits (i.e. OSHA PELs).

Eye Protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may likely, dust tight goggles are recommended. Have eye washing equipment available.

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Avoid skin contact with this product. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Full contact material: Nitrile rubber of minimum layer thickness 0.11 mm and break through time 480 minutes.

Body protection: Choose protection in relation to its type, to the concentration and the amount of any dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and of the amount of any dangerous substances at the specific workplace.

Respiratory Protection: Follow the OSHA respiratory regulations found in 29 CFR 1910.134 or European Standard EN149. Keep dust exposure to a minimum with engineering and administrative controls.

Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Use type N95 (US) or type P1 (EN 143) dust masks for nuisance levels of dust.

General Industrial Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

Environmental Exposure Controls

No special environmental precautions required.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State:	Solid
Appearance:	White powder
Odor:	Odorless
Odor Threshold:	No data available
pH:	4—9 (5% slurry in water)
Melting Point/Range:	>1600 deg. C
Boiling Point/Range:	2230 deg. C
Flash Point:	Not applicable
Evaporation Rate:	No information available
Flammability (solid, gas);	No information available
Flammability or Explosive Limits	
Upper:	No data available
Lower:	No data available
Vapor Pressure:	Negligible
Vapor Density:	No information available
Relative Density:	2.20
Solubility:	Slightly soluble in water (<0.1%)
Partition Coefficient; n-octanol/water:	No data available
Autoignition Temperature:	No information available
Decomposition Temperature:	No information available
Viscosity:	No information available
Molecular Formula:	SiO ₂
Molecular weight:	60.08
Oxidizing properties:	Not oxidizing

Section 10. STABILITY AND REACTIVITY

Reactivity

None known based on the information available.

Chemical Stability

This product is stable under the specified conditions of storage, shipment and use. Avoid storing at high temperatures or in direct sunlight. Do not store above 24 deg. C.

Possibility of Hazardous Reactions

No data available.

Conditions to Avoid

Exposure to moisture.

Incompatible Materials

Reacts with hydrogen fluoride, fluoride, oxygen difluoride, chlorine trifluoride, strong acids, strong bases and oxidizers.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors such as silicon oxides.

Section 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Silicon dioxide	>5000 mg/kg (rat) IUCLID (2000)	>5000 mg/kg (rabbit)	>0.139 mg/l/4h IUCLID (2000)

Toxicological information: Virtually nontoxic.

Toxicologically Synergistic Products: No information available

Delayed and Immediate Effects as well as Chronic Effects from Short and Long Term Exposure

Skin irritation: Rabbit not irritating. IUCLID (2000)

Skin sensitization: Over 10 years exposure, worker did not have any skin sensitization.

Serious eye damage/eye irritation: Not expected to cause serious eye irritation.

Respiratory sensitization: This product is not expected to cause skin sensitization.

Carcinogenicity Table below indicates if each agency has listed any ingredient as a Carcinogen.

Component	CAS-No.	IARC	NTP	ACGIH	OSHA	Mexico
Amorphous silica gel	7631-86-9	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects: Animal testing did not show any mutagenic effects.

Reproductive Effects: Animal testing did not show any hazardous effects.

Developmental Effects: No information available.

Teratogenicity: No information available.

Specific Target Organ Toxicity (STOT)-single exposure: None known.

Specific Target Organ Toxicity (STOT)-repeated exposure: None known.

Aspiration: No information available

Symptoms / Effects, Both Acute and Delayed: No information available.

Endocrine Disruptor Information: No information available.

Other Adverse Effects: The toxicological properties have not been fully investigated.

Section 12. ECOLOGICAL INFORMATION

Toxicity

No toxicity limit of solubility. Do not empty into drains.

Ingredient	Test	Result	Species	Exposure
Amorphous silica	LC50/96h/fish	>10000 mg/l	Fish	96h
Amorphous silica	EC50/24h/daphnia	=1000 mg/l	Daphnia magna	24h
Amorphous silica	EC50/72h/algae	>10000 mg/l	Algae	72h

Persistence/ Degradability

No information available.

Bioaccumulation Potential

Does not bioaccumulate. Accumulation in aquatic organisms is unlikely. Accumulation in terrestrial organisms is unlikely.

Mobility in Soil

No information available.

Other Adverse Effects

No information available

Section 13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product: This product is not considered a hazardous waste. Vacuum or shovel material into a closed container for reuse or disposal. Storage and disposal should be in accordance with applicable local, state and federal laws and regulations.

Contaminated Packaging: Local regulations may be more stringent than state or federal requirements.

RCRA P-Series: None listed

RCRA U-Series: None listed

Section 14. TRANSPORTATION INFORMATION

Land: **DOT (US):** Not regulated
ADR/RID (EU): Not regulated
TDG (Canada): Not regulated
Water: **IMO/IMDG:** Not regulated
Air: **IACO/IATA:** Not regulated

Special Precautions for User

No information available

Section 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/ Legislation Specific for the Substance or Mixture International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Amorphous silica	X	X	-	235-545-4	-		X	X	X	X	X

X indicates listed

U.S. Federal Regulations

TSCA: CAS# 7631-86-9; 63231-67-4 is listed on the TSCA inventory

CERCLA Hazardous Substances and Corresponding RQs: None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

SARA Codes: CAS# 7631-86-9; 63231-67-4

SARA 311/312 Hazardous Categorization:

Acute Health Hazard: No

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure: No

Reactive Hazard: No

SARA Section 313: No chemicals in this product are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants, Class 1 Ozone depletors or Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

OSHA: Not applicable

CERCLA: Not applicable

U.S. Department of Transportation (DOT)

Reportable Quantity (RQ): No

DOT Marine Pollutant: No

DOT severe Marine Pollutant: No

U.S. Department of Homeland Security (DHS)

This product does not contain any DHS chemicals.

States Right-to-Know

Amorphous silica CAS# 7631-86-9; 63231-67-4

California Prop 65: Not listed. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts: Listed.

New Jersey Right to Know: Listed SN 1655

Pennsylvania: Listed.

Florida: Listed

Rhode Island: Not listed

Illinois: Not listed

Connecticut - Hazardous Air pollutants: Not listed

Canadian Classification

WHMIS: S2: Keep out of reach of children

DSL: Listed.

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.

Risk and Safety Phrases: S22: Do not breath dust
S24/25: Avoid contact with skin and eyes.

Mexico—Grade

No information available.

International Regulations

EINECS Silica Gel 231-545-4

DSCl (EEC) R36/37/38—Irritating to eyes, respiratory system and skin.

International lists

Australia (NICNAS): Silica gel

Japan (MITI): Silica gel

Korea (TCCL): Silica gel

Philippines (RA6969): Silica gel

China: No products found

USA: TSCA

Section 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association) Rating (USA):

Health : 1
Flammability: 0
Instability: 0
Others: none

HMIS (Hazardous Materials Identification System)Rating (USA):

Health Hazard: 1
Chronic Health Hazard: *
Flammability: 0
Physical Hazard: 0
Personal Protection: E (safety glasses, gloves, dust respirator)

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to these products or handling of these products. Customers/users must comply with all applicable health and safety laws, regulations, and orders.

SDS REVISION SUMMARY: revision 010 dated 04/14/2020
replaces revision 009 dated 11/07/2016.

This document has been updated to comply with the U.S. OSHA HazCom 2012 Standard replacing the current Legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)