SST®-4

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 02/17/2005 Revision date: 05/26/2016 Supersedes: 11/19/2013 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product form : Substance

Trade name : SST®-4

Product code : SST4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Ink; Coating

Restrictions on use : No additional information available

1.3. Details of the supplier of the safety data sheet

Shamrock Technologies, Inc.
Foot of Pacific Street
Newark, NJ 07114-2888
T +1 (800) 349-1822 - F +1 (973) 733-2143
customerserviceteam@shamrocktechnologies.com - www.shamrocktechnologies.com

1.4. Emergency telephone number

Emergency number : CHEMTREC US: +1 (800) 424-9300 (24/7)
CHEMTREC INTERNATIONAL: +1 (703) 527-3887 (24/7)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Combustible Dust

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Signal word (GHS-US) : Warning

2.3. Other hazards

Other hazards not contributing to the classification : May form combustible dust concentrations in air.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	GHS-US classification
Polytetrafluoroethylene (Main constituent)	(CAS No) 9002-84-0	100	Comb. Dust

Full text of classification categories and H statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Wash with plenty of soap and water. After contact with molten product, cool skin area rapidly with cold water. Do not peel product from the skin. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	:	Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact	:	Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/injuries after eye contact	:	Not expected to present a significant eye contact hazard under anticipated conditions of normal use. Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	:	Not expected to be a primary route of exposure.
Chronic symptoms	:	No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Foam. Dry powder. Carbon dioxide. Water spray. Sand. Alcohol-resistant foam.
Unsuitable extinguishing media	:	Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Hazardous thermal decomposition products may include, but not limited to: acid fluorides, fluorinated compounds, hydrogen fluoride, carbon monoxide, and carbon dioxide.
Explosion hazard	:	Dust in the atmosphere and on surfaces may present a dust explosion hazard (for more information refer to OSHA Bulletin Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosion and NFPA 654: Standard for the Prevention of Fire and Dust explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids).
Reactivity	:	No decomposition if stored and applied as directed.

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.
Firefighting instructions	:	Wear protective gloves, protective clothing. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	:	Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Do not enter fire area without proper protective equipment, including respiratory protection.
Special protective equipment for fire fighters	:	Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.
Other information	:	Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid. Avoid breathing smoke and fumes. Exposure to fire/heat: keep upwind.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Ventilate the area thoroughly. Material can create slippery conditions. As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the preparation and ensure prompt removal from skin, eyes and clothing. 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. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). No flames, no sparks. Eliminate all sources of ignition.

6.1.1. For non-emergency personnel

Protective equipment	:	Use personal protective equipment (PPE).
Emergency procedures	:	Evacuate unnecessary personnel.
Measures in case of dust release	:	In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area. Follow emergency response plan and contact proper authorities if needed.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Carefully shovel or sweep up spilled material and place in suitable container.

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

Other information : Observe environmental regulations while carefully cleaning contaminated floors and objects.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Prevent the build-up of electrostatic charge. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Provide appropriate exhaust ventilation at places of dust forming. In case of insufficient ventilation, wear suitable respiratory equipment.

Safe use of the product : Do not use a torch to clean this material from equipment without local exhaust ventilation and respirator.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage area : Store in a dry area. Meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Polytetrafluoroethylene (9002-84-0)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ Inhalable Particle 3 mg/m³ Respirable particle
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ Total Dust (8hr) 5 mg/m³ Respirable fraction (8hr)

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).

Personal protective equipment : Avoid all unnecessary exposure. Dust formation: dust mask. Gloves. Protective goggles. Protective clothing. Safety glasses.

Hand protection : Heat resistant gloves. Chemically resistant protective gloves. Impermeable protective gloves. Protective gloves.

Eye protection : Safety glasses with side shields. Chemical goggles or safety glasses.

Skin and body protection : Protective clothing. Protective gloves.

Respiratory protection : The workers must use appropriate certified respirators when they are facing concentrations above the exposure limit. Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Free flowing powder
Colour	:	Off-white
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	320 °C
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosive limits	:	No data available
Explosive properties	:	Combustible
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Density	:	2.15 g/cm³
Solubility	:	Insoluble in water
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	> 315 °C
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions. Combustible Dust.

10.3. Possibility of hazardous reactions

Small amounts of hazardous gases and/or particulate matter may be released during drying, cleaning and moulding processes. These may irritate eyes, nose and throat. Large molten masses may give off hazardous gases.

10.4. Conditions to avoid

Overheating. Thermal decomposition. Abnormally long processing time or high temperatures can produce irritating and toxic fumes. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Finely divided aluminium powdered metals, potent oxidizers like fluorine (F2), and related compounds. May cause fire and explosion when in contact with incompatible materials. Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous thermal decomposition products may include, but not limited to: acid fluorides, fluorinated compounds, hydrogen fluoride, carbon monoxide, and carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Dermal; Inhalation
Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified

Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified

Polytetrafluoroethylene (9002-84-0)	
IARC group	3 - Not classifiable

Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Combustion or overheating may cause evolution of particulate matter, which can cause polymer fume fever, a temporary flu-like illness. Symptoms may include fever, chills and sometimes cough, of approximately 24 to 48 hours duration.
Symptoms/injuries after inhalation	:	Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact	:	Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/injuries after eye contact	:	Not expected to present a significant eye contact hazard under anticipated conditions of normal use. Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	:	Not expected to be a primary route of exposure.
Chronic symptoms	:	No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

Polytetrafluoroethylene (9002-84-0)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Polytetrafluoroethylene (9002-84-0)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming	:	No known ecological damage caused by this product.
Other information	:	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Like most thermoplastic plastics the product can be recycled. If recycling is not practicable, dispose of in compliance with local regulations. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products.
Waste disposal recommendations	:	Remove waste in accordance with local and/or national regulations. Recycle/reuse. Dispose in a safe manner in accordance with local/national regulations.
Additional information	:	Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

SST®-4 (9002-84-0)
All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List)

EU-Regulations

SST®-4 (9002-84-0)
All components of this product are listed, or excluded from listing, on EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

SST®-4 (9002-84-0)
All components of this product are listed, or excluded from listing, on KECI (Korean Existing Chemicals Inventory) All components of this product are listed, or excluded from listing, on PICCS (Philippines Inventory of Chemicals and Chemical Substances) All components of this product are listed, or excluded from listing, on the AICS (Australian Inventory of Chemical Substances) All components of this product are listed, or excluded from listing, on the Japanese ENCS (Existing & New Chemical Substances) inventory All components of this product are listed, or excluded from listing, on the Japanese ISHL (Industrial Safety and Health Law) All components of this product are listed, or excluded from listing, on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

SECTION 16: Other information

Revision date : 05/26/2016

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

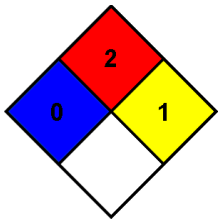
Full text of H-statements:

H232	May form combustible dust concentrations in air

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health	:	0 Minimal Hazard - No significant risk to health
Flammability	:	2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
Physical	:	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Personal Protection	:	F F - Safety glasses, Gloves, Synthetic apron, Dust respirator

Indication of changes:

2	Hazards identification	Modified	GHS-US Classification Label elements Other hazards

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product