SAFETY DATA SHEET

SSP2551 Cured

SECTION 1: IDENTIFICATION

Product identifier:	SSP2551 cured product
Recommended use:	Conductive fluorosilicone elastomer
Restrictions on use:	Industrial use only
Manufactured by:	Specialty Silicone Products, Inc. Corporate Technology Park 3 McCrea Hill Road Ballston Spa, NY 12020
Supplied by:	Specialty Silicone Products, Inc. Corporate Technology Park 3 McCrea Hill Road Ballston Spa, NY 12020
Emergency telephone:	CHEMTREC – 1-800-424-9300
Hours:	24 hours/365 days
Revised:	4/20/2021 by Sarah Lewis

SECTION 2: HAZARD IDENTIFICATION

Classification (GHS):
Skin sensitization (Category 1), H317
Carcinogenicity (Category 2), H351
Specific organ toxicity – repeated exposure, inhalation (Category 1), H372
Chronic aquatic toxicity (Category 3), H412

Signal word: Danger

Symbol(s):

Hazard statements:

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long-lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	If exposed: Call a POISON CENTER or doctor/physician.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or a rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.

Other hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Polydimethylsiloxane with vinyl groups, polydimethylsiloxane with fluoro groups, fillers and nickel coated aluminum

Information on ingredients: This material does not contain any ingredients above the permitted limit(s)

Ingredient	wt%	CAS No.
Nickel	13-52	7440-02-0
Aluminum	13-52	7429-90-5
Fluorosilicone polymers	30-35	-

SECTION 4: FIRST AID MEASURES

General information: Get medical attention if irritation or other symptoms occur

After inhalation: Material cannot be inhaled under normal circumstances. Grinding, sanding, milling or similar can release dust which may cause irritation. Remove casualty to fresh air and keep at rest. If symptoms develop, obtain medical attention.

After contact with skin:	After skin contact, wipe off excess material with cloth or paper. Wash with soap and water. If skin irritation or rash occurs: Get medical attention.
After contact with eyes:	After eye contact, immediately hold eyelids apart and flush with plenty of water for at least 15 minutes.
After swallowing:	Do not induce vomiting. Get medical attention if symptoms occur.
Most important symptoms/ effects (acute and delayed):	The most important known symptoms and effects are described in the labelling (see Section 2) and/or in Section 11.
Advice for the physician:	Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Suitable extinguishing materials:	Water spray, alcohol-resistant foam, dry chemical, carbon dioxide
Unsuitable extinguishing materials:	Water jet
Fire and explosion hazards:	Grinding, sanding, milling or cutting can release a fine metal powder which may be flammable.
Hazardous combustion products:	Carbon monoxide, carbon dioxide, silicon dioxide, formaldehyde, hydrogen fluoride.
Special protective equipment:	Wear self-contained breathing apparatus and full protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Precautions:	Secure the area. Wear personal protective equipment (see Section 8). Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Containment: Prevent material from entering surface water, drains, sewers and soil. Retain contaminated water and extinguishing water. Dispose of in prescribed marked containers.
Methods for cleaning up:	Shovel up and place in a container for appropriate disposal.

SECTION 7: HANDLING AND STORAGE

Handling:	Use in well ventilated areas with appropriate personal protective equipment (see Section 8). Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition. For precautions, see section 2.2.
Storage:	Store in original containers, tightly closed. Store in a cool, dry place.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible exposure limits: Some of the components are known to have assigned exposure limits

Substance	Occupational exposure limits	
Nickel metal	ACGIH TLV	1.5 mg/m^3 *
CAS 7440-02-0	OSHA PEL	1.0 mg/m^3
Aluminum metal	ACGIH TLV	1.0 mg/m^3
CAS 7782-42-5	OSHA PEL	15 mg/m^3 **

* As Ni in an inhalable fraction
** Respirable dust/welding fume

Exposure controls: Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Ventilation: Use with adequate ventilation.

Respiratory protection: Not normally required unless generating dust, in which case respiratory protection will be required.

Hand protection: Liquid-tight vinyl or rubber gloves. Wash hands after removing gloves.

Eye protection: Safety glasses with side-shields.

Other protective clothing/ equipment: Additional protective equipment or clothing is not normally required. Provide an eye bath and safety shower.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black solid
Odor: Faint
Melting point/range: Not applicable
Boiling point/boiling range: Not applicable
Flash point: Not applicable
Lower explosion limit (LEL): Not applicable
Upper explosion limit: Not applicable
Vapor pressure: Not applicable
Density: ca. 1.8 to 2.3 g/cm^3 at 20°C (68°F)
Water solubility: Insoluble
pH: Not applicable
Viscosity: Not applicable
Thermal decomposition: >150°C (>300°F)

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SECTION 10:	**STABILITY AND REACTIVITY**
General information:	If stored and handled in accordance with standard industrial practices, no hazardous reactions are known.
Conditions to avoid:	This material can react vigorously with acids to liberate hydrogen which can form explosive mixtures with air. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, $Ni(CO)_4$, a toxic gas. Metal powders when heated in reducing atmospheres may become pyrophoric.
Materials to avoid:	Avoid contact with acids, oxidizing agents, sulfur compounds, hydrogen gas, oxygen, methanol, organic solvents, aluminum, fluorine and ammonia.
Hazardous decomposition products:	Hydrogen fluoride. Nickel carbonyl gas. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150°C (302°F) through oxidation.
Further information:	Hazardous polymerization cannot occur.

SECTION 11:	**TOXICOLOGICAL INFORMATION**
Acute toxicity:	Whole product not tested. Nickel is non-toxic by ingestion – LD_{50} oral rat > 9000mg/kg
Skin corrosion/irritation:	Whole product not tested.
Skin sensitization:	Nickel metal is a well-known skin sensitizer. Direct and prolonged skin contact with metallic nickel may induce and elicit allergic skin reactions in those people already sensitized to nickel, so called nickel allergic contact dermatitis. Individuals known to be allergic to nickel should avoid contact with nickel whenever possible to reduce the likelihood of nickel allergic contact dermatitis (skin rashes). Repeated contact may result in persistent chronic palmar/hand dermatitis in a smaller number of individuals, despite efforts to reduce or avoid nickel exposure.
Serious eye damage/irritation:	Whole product not tested. Nickel graphite filler may cause eye irritation or abrasion.
Inhalation hazard:	Avoid inhalation of dust. Animal studies (rats) show that repeated dose inhalation of nickel metal damages the lung. Chronic inflammation, lung fibrosis and accumulation of nickel particles were observed. Nickel metal induced asthma is very rare. 3 case reports are available; the data are not sufficient to conclude that nickel metal is classified as a respiratory sensitizer.
Germ cell mutagenicity:	Whole product not tested.

Carcinogenicity:	Whole product not tested. To date, there is no evidence that nickel metal causes cancer in humans based on epidemiology data from workers in nickel producing and nickel consuming industries. A recent animal (rat) inhalation study showed no increased respiratory cancer risk for nickel metal powder indicating that no carcinogen classification is warranted for nickel metal. The US NTP has listed metallic nickel as reasonably anticipated to be a human carcinogen. IARC found that there was inadequate evidence that metallic nickel is carcinogenic to humans but since there was sufficient evidence that it is carcinogenic to animals, IARC concluded that metallic nickel is possibly carcinogenic to humans (Group 2B). In 1997, the ACGIH categorized elemental nickel as "Not Suspected as a Human Carcinogen". Epidemiological studies of workers exposed to nickel powder and to dust and fume generated in the production of nickel alloys and of stainless steel have not indicated the presence of a significant respiratory cancer hazard.
Reproductive toxicity:	Whole product not tested.
Specific organ toxicity (acute):	Not tested.
Specific organ toxicity (chronic):	Not tested
Further toxicological information:	None

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	Contains nickel which is very toxic to aquatic organisms. Toxicity to fish: LC50 – Cyprinus carpio (carp) – 1.3 mg/L – 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 – Daphnia magna (water flea) – 1 mg/L – 48 h
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
PBT and vPvB assessment:	No data available.
Other adverse effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

Product disposal:	Recommendation: Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include e.g. landfill or incineration.

Packaging disposal:	Recommendation: Completely discharge containers. Contaminated packaging should be treated with the same precautions as the material.

SECTION 14: TRANSPORT INFORMATION

This product is not regarded as dangerous goods according to national and international regulations on the transport of dangerous goods.

SECTION 15: REGULATORY INFORMATION

General information:	Skin sensitization – Category 1 Carcinogenicity – Category 2 Specific Target Organ Toxicity, Repeated Exposure – Category 1 Aquatic Chronic – Category 3

U.S. Federal Regulations

	Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
TSCA:	This material or its components are listed on or are in compliance with requirements of the TSCA Chemical Substance Inventory
CERCLA:	Nickel is a CERCLA Hazardous Substance with a reportable quantity of 100 lbs (45 kg).
EPCRA:	Nickel and aluminum are subject to the reporting requirements of Section 313.

US State Regulations

California Proposition 65:	This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
Massachusetts Substance List:	112945-52-5 Silica, amorphous, fumed
New Jersey Right-to-Know Hazardous Substance List:	112945-52-5 Silica, amorphous, fumed
Pennsylvania Right-to-Know Hazardous Substance List:	112945-52-5 Silica, amorphous, fumed

SECTION 16: OTHER INFORMATION

Date of preparation:	4/20/2021
Other:	These data are offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is made.
Data sources:	Input raw material SDS

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Abbreviations:

TSCA – Toxic Substances Control Act
OSHA – Occupational Safety and Health Administration
CAS – Chemical Abstracts Service
GHS – Globally Harmonized System (of Classification and Labeling of Chemicals)
CERCLA – Comprehensive Environmental Response Compensation and Liability Act
IARC – International Agency for Research on Cancer
NTP – National Toxicological Program
EPCRA – Emergency Planning and Community Right-to Know Act