

SAFETY DATA SHEET
SSP502 V0, V1 and FR grades

SECTION 1: IDENTIFICATION

Product identifier: SSP502-40V0, SSP502-40V1, SSP502-55LT, SSP502-60FR, SSP502-60FR TRANSFER, SSP502-60V0, SSP502-60V1, SSP502-60V1 TRANSFER and SSP502-80V1

Recommended use: Conductive silicone 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: 2/5/2021 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.
H361f	Suspected of damaging fertility
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long-lasting effects.

SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

Precautionary statements:

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| 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 and nickel coated graphite
 Information on ingredients: This material does not contain any ingredients above the permitted limit(s)

Ingredient	wt%	CAS No.
Nickel	33-48	7440-02-0
Graphite	12-27	7782-42-5
Silicone polymers	25-40	-

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

SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

After contact with skin:	irritation. Remove casualty to fresh air and keep at rest. If symptoms develop, obtain medical attention. After skin contact, wipe off excess material with cloth or paper. Wash with soap and water.
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
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Suitable extinguishing materials:	Water spray, alcohol-resistant foam, dry chemical, carbon dioxide
Unsuitable extinguishing materials:	Water jet
Fire and explosion hazards:	This material can react vigorously with acids to liberate hydrogen which can form explosive mixtures with air. 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
Special protective equipment:	Wear self-contained breathing apparatus and full protective equipment.

SECTION 6:	ACCIDENTAL RELEASE MEASURES
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Precautions:	Secure the area. Wear personal protective equipment (see Section 8). Indicate risk of slipping on released material.
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. Caution: contaminated surfaces may be slippery.

SECTION 7:	HANDLING AND STORAGE
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Handling:	Use in well ventilated areas with appropriate personal protective equipment (see Section 8).
Storage:	Store in original containers, tightly closed. Store in a cool, dry place.

SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

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 CAS 7440-02-0	ACGIH TLV	1.5 mg/m ³ *
	OSHA PEL	1.0 mg/m ³
Synthetic graphite CAS 7782-42-5	ACGIH TLV	2.0 mg/m ³ **
	OSHA PEL	15 mppcf

* As Ni in an inhalable fraction

** As respirable fraction

mppcf – millions of particles per cubic foot of air

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.

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 2.1 g/cm³ at 20°C (68°F)

Water solubility: Insoluble

pH: Not applicable

Viscosity: Not applicable

Thermal decomposition: >150°C (>300°F)

SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

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:	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.
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. Inhalation may cause chronic inflammation and lung fibrosis.
Germ cell mutagenicity:	Whole product not tested.
Carcinogenicity:	Whole product not tested.
Reproductive toxicity:	Whole product not tested.
Specific organ toxicity (acute):	Not tested.
Specific organ toxicity (chronic):	Not tested
Further toxicological information:	NTP has listed metallic nickel as reasonably anticipated to be a human carcinogen. IARC found that there was inadequate evidence

SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

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).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	Contains nickel which is very toxic to aquatic organisms.
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
PBT and vPvB assessment:	No data available.

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
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U.S. Federal Regulations

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 is 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.
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SAFETY DATA SHEET

SSP502 V0, V1 and FR grades

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:	2/5/2021
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
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