

SAFETY DATA SHEET
SSP502 non-FR grades

SECTION 1: IDENTIFICATION

Product identifier: SSP502-30, SSP502-30T, SSP502-40, SSP502-40(DICUP), SSP502-45, SSP502-50, SSP502-55, SSP502-65AC, SSP502-65(DICUP), SSP502-65(VAROX), SSP502-65(VAROX-EX), SSP502-65T, SSP502-70, SSP502-75, SSP502-75U, SSP502-80

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.

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Precautionary statements:	H412	Harmful to aquatic life with long-lasting effects.
	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:	This product contains substances which are relevant for the assessment in Section 12	

SECTION 3:	COMPOSITION/INFORMATION ON INGREDIENTS
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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	-

The products contains the following substances of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 57) in amounts ≥ 0.1 wt%.

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Type	CAS no.	Substance	Content (wt%)
VERU	556-67-2	Octamethylcyclotetrasiloxane	< 0.3
VERU	540-97-6	Dodecamethylcyclohexasiloxane	< 1.4
VERU	541-02-6	Decamethylcyclopentasiloxane	< 1.4

Type: INHA: ingredient, VERU: impurity

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.
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:	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

Precautions:	Secure the area. Wear personal protective equipment (see Section 8). Indicate risk of slipping on released material.
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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

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.

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

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Lower explosion limit (LEL):	Not applicable
Upper explosion limit:	Not applicable
Vapor pressure:	Not applicable
Density:	ca. 1.8 to 2.1 g/cm ³ at 20°C (68°F)
Water solubility:	Insoluble
pH:	Not applicable
Viscosity:	Not applicable
Thermal decomposition:	>150°C (>300°F)

SECTION 10:	STABILITY AND REACTIVITY
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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
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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.

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Inhalation hazard:	Avoid inhalation of dust. Inhalation may cause chronic inflammation and lung fibrosis.
Germ cell mutagenicity:	Whole product not tested. Octamethylcyclotetrasiloxane (D ₄) – based on known data a significant mutagenic potential may be excluded. Decamethylcyclopentasiloxane (D ₅) – based on known data a significant mutagenic potential may be excluded.
Carcinogenicity:	Whole product not tested. Octamethylcyclotetrasiloxane (D ₄) – In a two year combined chronic toxicity and carcinogenicity inhalation study with D ₄ in rats, an increased incidence for (uterine) endometrial cell hyperplastic and endometrial adenomas were observed in the highest exposure level of 700 ppm in female rats. The same effects were not seen at the other dose levels of 10, 30 and 150 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing D ₄ would result in significant risk to humans. Decamethylcyclopentasiloxane (D ₅) – In a two year combined chronic toxicity and carcinogenicity inhalation study with D ₅ in rats, an increased incidence for (uterine) endometrial tumors was observed in the highest exposure level of 160 ppm in female rats. The same effects were not seen at the other dose levels of 10 and 40 ppm. Whether or not this increase in incidence is truly related to the exposure to D ₅ is questionable and yet to be determined. Based on present knowledge, it is unlikely that industrial, commercial or consumer uses of products containing D ₅ would result in a significant risk to humans.
Reproductive toxicity:	Whole product not tested. Octamethylcyclotetrasiloxane (D ₄) – In a two generation reproductive study via inhalation with D ₄ in rats, decreased mean live litter size and prolonged labor (dystocia) were observed at the 500 ppm and 700 ppm exposure levels. The relevance of these effects in humans cannot be determined at this time. Because these effects were only seen at very high exposure levels, it is unlikely that industrial, commercial and/or consumer uses of products containing D ₄ would result in a significant risk to humans. Based on animal experiments there is no indication of developmental effects. Decamethylcyclopentasiloxane (D ₅) – based on known data the criteria for classification as toxic to reproduction are not fulfilled.
Specific organ toxicity (acute):	Not tested.
Specific organ toxicity (chronic):	Not tested.

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Octamethylcyclotetrasiloxane (D₄) – In a 90-day subchronic inhalation study with D₄, female rats at the highest dose level of 300 ppm showed a reversible increase in liver and ovary weights. Rats exposed to inhalation concentrations of 5 ppm and 10 ppm did not show any toxic effects.

Further toxicological information: 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).

SECTION 12:	ECOLOGICAL INFORMATION
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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:	This product contains substances $\geq 0.1\%$ that have been subjected to the SVHC process according to REACH regulation (EC) No. 1907/2006 Art. 57 as fulfilling the PBT and/or vPvB criteria according to REACH regulation (EC) No. 1907/2006 Annex XII.

SECTION 13:	DISPOSAL CONSIDERATIONS
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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
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This product is not regarded as dangerous goods according to national and international regulations on the transport of dangerous goods.

SECTION 15:	REGULATORY INFORMATION
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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.

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