
SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION:

Product name: NUFLEX® 311 S.L., R.V.
Recommended use: Silicone Sealant for Weather Sealing Recreational Vehicles
Restrictions on use: No further information available
Manufacturer: NUCO INC.
150 Curtis Drive
Guelph, Ontario N1K 1N5
Tel: (519)-823-4994
Fax: (519)-823-1099

Emergency telephone: Infotrac 24 Hour Emergency Tel: (800)-535-5053

SECTION 2 – HAZARDS IDENTIFICATION:

GHS Classification:

Eye irritation	–	Category 2B
Skin irritation	–	Category 2
Skin sensitization	–	Category 1B
Carcinogenicity	–	Category 2

GHS Label elements:

Hazard symbols:



Signal word: Warning

Hazard statements: Causes skin irritation
May cause an allergic skin reaction
Causes eye irritation
Suspected of causing cancer

Precautionary statements:

Prevention: Obtain special instructions before use
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust, fume or vapors.
Do not get in eyes, on skin or on clothing.
Wash hands and other skin areas thoroughly after handling
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection.

Response : If on skin, wash with plenty of soap and water. If skin irritation or rash occurs, get medical attention.
If in eyes, rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Storage: Store locked up. Store in a well-ventilated place.

Disposal: Dispose of contents and container in accordance with applicable local, regional, national and international regulations.

Other hazards: None known

Supplemental information: 75% of the mixture consists of component(s) of unknown acute toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS:

Substance/Mixture : Mixture

Chemical Name	CAS No.	Concentration (%)
Methyl Tri(methylethylketoxime)silane	22984-54-9	3.0 - 7.0
Amorphous Silica	7631-86-9	3.0 – 7.0
Calcium Carbonate	1317-65-3	10.0 – 30.0
Octamethylcyclotetrasiloxane	556-67-2	0.1 – 1.0
<u>Pigmented sealants may contain:</u>		
Carbon Black	1333-86-4	0.1 – 1.0
Titanium Dioxide	13463-67-7	0.1 – 1.0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4 - FIRST AID MEASURES:

Eye contact:	Flush with copious quantities of lukewarm water for at least 15 minutes. Do not attempt to physically remove the solids or gums from the eye. Seek medical attention immediately if irritation persists.
Skin contact:	Remove contaminated clothing. Wash thoroughly with warm water and non-abrasive soap. Seek medical attention if you feel ill or a reaction develops.
Inhalation:	Remove to fresh air and provide water. Seek medical attention if you feel ill or a reaction develops.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
Most important symptoms/effects, acute and delayed:	None known.
Indication of immediate medical attention and special treatment needed:	Provide general supportive measures and treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES:

Suitable extinguishing media:	Carbon dioxide, dry chemical, water fog or foam. Water can be used to cool fire exposed containers.
Unsuitable extinguishing media:	None known.
Specific hazards arising from the chemical:	Exposure to combustion products such as carbon oxides, silicone oxides and formaldehyde may be hazard to health.
Special protective equipment and precautions for fire fighters:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

SECTION 6 – ACCIDENTAL RELEASE MEASURES:**Personal precautions, protective equipment and emergency procedures:**

Follow safe handling advice and personal protective equipment recommendations in Section 8.

Environment precautions:

Discharged into the environment must be avoided. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:

Restrict access to the area of the spill. Provide ventilation, NIOSH/MHSA approved respirator and protective clothing. Scrape up sealant and place in container for disposal. Clean area as appropriate since silicone materials can represent a slip hazard. Cleaning may require steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup.

SECTION 7 – HANDLING AND STORAGE:**Precautions for safe handling:**

Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage, including any incompatibilities:

Store in an adequately ventilated area under dry conditions between 50°F (10°C) to 77°F (25°C) and keep container tightly sealed when not in use. Do not store with strong oxidizing agents.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION:**Control Parameters:**

Ingredient	CAS No.	Value Type (form of exposure)	Control parameters/ Permissible concentration	Basis
Amorphous Silica	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m ³ /%SiO ₂ (Silica)	OSHA Z-3
		TWA	6 mg/m ³ (Silica)	NIOSH REL
Calcium Carbonate	1317-65-3	TWA (Inhalable particulate)	10 mg/m ³	ACGIH TLV
		TWA (respirable particulate)	5 mg/m ³	ACGIH TLV
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	OSHA PEL
		TWA	10 ppm	ACGIH TLV
		STEL	15 ppm	ACGIH TLV
Carbon Black	1333-86-4	TWA	3.5 mg/m ³	NIOSH REL
		TWA	3.5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m ³	ACGIH
Titanium Dioxide	13463-67-7	TWA	15 mg/m ³	OSHA PEL
		TWA	10 mg/m ³	ACGIH TLV

Hazardous components without workplace control parameters:

Methyl Tri(methylethylketoxime)silane (CAS# 22984-54-9)

Occupational exposure limits of decomposition products:

Ingredient	CAS No.	Value Type (form of exposure)	Control parameters/ Permissible concentration	Basis
Methyl Ethyl Ketoxime	96-29-7	TWA	10 ppm	DCC OEL
	Further information: Skin sensitization			
		TWA	10 ppm	US WEEL

Engineering controls:

Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations. Use respiratory protection unless local exhaust ventilation is provided or exposures are within guidelines.

Personal protective equipment:

Safety glasses with side-protection, impermeable gloves (e.g., neoprene, nitrile, silver shield (R)), coveralls or apron are important in preventing contamination of eyes, skin and clothing. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Paste, thixotropic sealant
Odor:	Low odor
Odor threshold:	Not available
pH (ASTM D1293):	Not available
Melting point/Freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	Not applicable
Evaporation rate:	Not available
Flammability (solid, gas):	Not classified as a flammability hazard
Upper flammability or explosion limit:	Not available
Lower flammability or explosion limit:	Not available
Vapor pressure:	Less than 5 mm Hg
Vapor density:	Greater than 1
Specific gravity:	1.12
Solubility:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable
Volatile Organic Content:	28 grams per liter, <3% by weight (Chemically Curing Sealants and Caulks – CARB Method 310: VOC less water, less exempt compounds and LVP-VOCs).

SECTION 10 – STABILITY AND REACTIVITY:

Reactivity:	Not classified as a reactivity hazard.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents.
Conditions to avoid:	Moisture and incompatible materials.
Incompatible materials:	Strong oxidizing agents or electrophiles (e.g. ferric chloride). Concentrated acids or bases can degrade the silicone polymer.
Hazardous decomposition products:	Carbon oxides, silicone dioxide, metal oxides, formaldehyde and traces of incompletely burned carbon products.

SECTION 11 - TOXICOLOGICAL INFORMATION:**Information on the likely routes of exposure:**

Inhalation:	Prolonged inhalation may be harmful.
Ingestion:	May be harmful if swallowed.
Skin contact:	May cause skin irritation.
Eye contact:	May cause eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics:

May cause an allergic skin reaction. Suspected of causing cancer. Although the carbon black (CAS# 1333-86-4) is encapsulated by the silicone sealant, prolonged overexposure to carbon black dust causes lung fibrosis. Although the titanium dioxide (CAS# 13463-67-7) is encapsulated by the silicone sealant, prolonged overexposure to titanium dioxide dust causes tightness pain in the chest, coughing and difficulty breathing.

Acute toxicity:

Ingredient name	Result	Species	Dose	Exposure
Amorphous Silica	LD50 Oral	Rat	>3,300 mg/kg	----
	LC50 Inhalation	Rat	>2.08 mg/L	4 hours
	LD50 Dermal	Rabbit	>5,000 mg/kg	----
Methyltri(methylethylketoxime) silane	LD50 Oral	Rat	>2,520 mg/kg	----
	LC50 Inhalation	Rat	>4.8 mg/L	4 hours
Calcium Carbonate	LD50 Oral	Rat	6,450 mg/kg	----
Octamethylcyclotetrasiloxane	LD50 Oral	Rat	1,540 mg/kg	----
	LC50 Inhalation	Rat	36 mg/L	4 hours
Carbon Black	LD50 Oral	Rat	>5,000 mg/kg	----
	LC50 Inhalation	Rat	>0.0046 mg/L	4 hours
Titanium Dioxide	LD50 Oral	Rat	>5,000 mg/kg	----
	LC50 Inhalation	Rat	>6.82 mg/L	4 hours

Skin corrosion/irritation: Skin irritation possible through repeated direct contact with the ketoxime in the uncured sealant.

Serious eye damage/irritation: Eye irritation possible through repeated direct contact with the ketoxime in the uncured sealant.

Aspiration hazard: No data available

Specific target organ toxicity – single exposure: Not classified based on available information.

Specific target organ toxicity – repeated exposure: Not classified based on available information.

Respiratory or skin sensitization: Allergic skin sensitization through repeated direct contact with the ketoxime in the uncured sealant.

Carcinogenicity: No ingredients considered by IARC, NTP or OSHA to be carcinogens. Male rodents exposed to Methyl Ethyl Ketoxime (CAS# 96-29-7) vapor throughout their lifetime developed liver carcinomas. These carcinomas were statistically increased at a concentration of 374 ppm.

Pigmented Sealants: carbon black (CAS# 1333-86-4) and titanium dioxide (CAS# 13463-67-7) are classified as IARC Group 2B – Possibly Carcinogenic to Humans.

Reproductive toxicity: Evidence of reproductive effects in laboratory animals when exposed to Octamethylcyclotetrasiloxane (CAS# 556-67-2) by inhalation at concentrations of 500 ppm or higher for 70 days prior to mating. Methyl Ethyl Ketoxime (CAS# 96-29-7) is not considered a reproductive or developmental toxin based on

studies on rats.

Teratogenicity:
Germ-cell mutagenicity:

No data available.
Methyl Ethyl Ketoxime (CAS# 96-29-7) is not considered mutagenic or genotoxic based on in vivo and in vitro studies.

SECTION 12 – ECOLOGICAL INFORMATION:

Ecotoxicity:

Methyltri(methylethylketoxime)silane:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): >120 mg/L, 96 hrs.
Toxicity to daphnia and EC50 (Daphnia magna (water flea)): >120 mg/L, 48 hrs.
other aquatic invertebrates:
Toxicity to algae: ErC50 (Selenastrum capricornutum (green algae)): 94mg/L, 72 hrs.

Carbon black:

Toxicity to fish: LC50 (Danio rerio (zebra fish)): >1,000 mg/L, 96 hrs.
Toxicity to daphnia and EC50 (Daphnia magna (water flea)): >5,600 mg/L, 24 hrs.
other aquatic invertebrates:
Toxicity to algae: NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/L, 72 hrs.

Titanium Dioxide:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): >100 mg/L, 96 hrs.
Toxicity to daphnia and EC50 (Daphnia magna (water flea)): >100 mg/L, 48 hrs.
other aquatic invertebrates:
Toxicity to algae: EC50 (Skeletonema costatum (marine diatom)): >10,000 mg/L, 72 hrs.
Toxicity to bacteria: EC50: >1,000 mg/L, 3 hrs.

Persistence and degradability:

Methyltri(methylethylketoxime)silane:

Biodegradability: Not readily biodegradable
Biodegradation: 14.5%, 21 days

Bioaccumulative potential:

Methyltri(methylethylketoxime)silane:

Partition coefficient: n-octanol/water: log Pow: 11.2

Mobility in soil:

No data available.

Other adverse effects:

No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS:

Disposal instructions:

This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local, regional, national and international regulations.

Waste from residues:

Dispose of in accordance with local regulations.

Contaminated packaging:

Dispose of as unused product in a safe way.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14 - TRANSPORT INFORMATION:

Shipping information:

Not subject to DOT, TDG, IMDG Code or IATA Regulations.

SECTION 15 - REGULATORY INFORMATION:**SARA 304 Extremely Hazardous Substances Reportable Quantity:**

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards:

Acute Health Hazard, Chronic Health Hazard

SARA 302:

No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313:

This product does not contain any chemical components with known CAS No. that exceed the threshold reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know:

Dimethyl siloxane, hydroxy-terminated	70131-67-8	50 – 80%
Amorphous Silica	7631-86-9	3 – 7%
Methyl Tri(methylethylketoxime)silane	22984-54-9	3– 7%
Carbon black	1333-86-4	0.1 – 1%
Titanium dioxide	13463-67-7	0.1 – 1%

New Jersey Right To Know:

Dimethyl siloxane, hydroxy-terminated	70131-67-8	50 – 80%
Amorphous Silica	7631-86-9	3 – 7%
Methyl Tri(methylethylketoxime)silane	22984-54-9	3– 7%
Dimethyl Siloxane, Trimethylsiloxy-terminated	63148-62-9	15 – 30%
Carbon black	1333-86-4	0.1 – 1%
Titanium dioxide	13463-67-7	0.1 – 1%

California Proposition 65:

This product contains trace amount of substances, in the form of airborne or unbound particles, known to the State of California to cause cancer or other reproductive harm.

The ingredients of this product are reported in the following inventories:**TSCA:**

All chemical substances in this product are included on or exempted from listing on the TSCA inventory of Chemical Substances.

DSL:

All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempted from listing on the Canadian Domestic Substances List (DSL).

NFPA Profile: Health 2, Flammability 1, Reactivity 0

SECTION 16 - OTHER INFORMATION:**Prepared by:**

Technical Services Department

Revision date:

February 3, 2016

The information herein is given in good faith, but no warranty, express or implied, is made. Product users should make independent judgements of the suitability of this information to ensure proper use and to protect the health and safety of employees.

Form: SDSNUFLEX311S.L.R.V. Rev.: 1 Date: 02/16