

Silwet* L-77/TSD/204KG

SAFETY DATA SHEET

1. Identification

Product identifier: Silwet* L-77/TSD/204KG

Other means of identification

Synonyms: Siloxane Polyalkyleneoxide Copolymer

Recommended use and restriction on use

Recommended use: Industrial and Agricultural Use.

Restrictions on use: Not for aerosol use

Manufacturer/Importer/Distributor Information : Momentive Performance Materials - Sistersville
10851 Energy Highway
FRIENDLY WV 26146

Contact person : commercial.services@momentive.com

Telephone : General information
+1-800-295-2392

Emergency telephone number Supplier : CHEMTREC
1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Inhalation)	Category 4
Serious Eye Damage/Eye Irritation	Category 2A

Label Elements

Hazard Symbol:



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Signal Word:	Warning
Hazard Statement:	H332; Harmful if inhaled. H319; Causes serious eye irritation.
Precautionary Statements	
Prevention:	Wear protective gloves. Wear respiratory protection Use only outdoors or in a well-ventilated area. Do not breathe vapors. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wear eye protection/face protection.
Response:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention. IF SWALLOWED: Call a POISON CENTRE/doctor/ if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. Call a POISON CENTRE/doctor/ if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage:	Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
Polyalkyleneoxide modified Heptamethyltrisiloxane	27306-78-1	50 - <100%	No data available.
Polyalkyleneoxide Modified Heptamethyltrisiloxane	67674-67-3	5 - <10%	No data available.

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: No action shall be taken involving any personal risk or without suitable training. Do not give victim anything to drink if he is unconscious. Get medical attention if symptoms occur.

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Ingestion:	Do not induce vomiting. If conscious, drink plenty of water. Call a physician or poison control center immediately.
Inhalation:	After inhalation of aerosol/mist seek medical advice immediately. Move the exposed person to fresh air at once. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms persist. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Symptoms:	No data available.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treatment is symptomatic and supportive.
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5. Fire-fighting measures

General Fire Hazards:	Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Alcohol resistant foam. Carbon dioxide Dry chemical.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical:	In case of fire, carbon monoxide and carbon dioxide may be formed. Acute overexposure to the products of combustion may result in irritation of the respiratory tract. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.
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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
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Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Caution: Contaminated surfaces may be slippery. Avoid contact with skin and eyes. See Section 8 of the SDS for Personal Protective Equipment. Keep out of reach of children.

Methods and material for containment and cleaning up: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

Environmental Precautions: Do not allow runoff to sewer, waterway or ground.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected. Do not taste or swallow. Do not get in eyes, on skin, on clothing. Use personal protective equipment as required. Wash hands after handling.

Conditions for safe storage, including any incompatibilities: Keep container closed. Store in original container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls

Provide eyewash station and safety shower. General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Individual protection measures, such as personal protective equipment

General information: General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Eye/face protection: Safety glasses with side shields

Skin Protection

Hand Protection: Chemical resistant gloves

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- Other:** Wear suitable protective clothing and eye/face protection.
- Respiratory Protection:** If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).
- Hygiene measures:** Do not breathe vapour/aerosol. When using do not eat, drink or smoke. Use only with adequate ventilation. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance

- Physical state:** liquid
- Form:** liquid
- Color:** Pale yellow
- Odor:** Polyether
- Odor threshold:** No data available.
- pH:** 5.4
- Melting point/freezing point:** -1 °C
- Initial boiling point and boiling range:** > 150 °C (1,013 hPa) Copolymer
- Flash Point:** 166 °C (Closed Cup)
- Evaporation rate:** < 1 (n-Butyl acetate=1)
- Flammability (solid, gas):** No data available.
- Upper/lower limit on flammability or explosive limits**
- Flammability limit - upper (%):** No data available.
- Flammability limit - lower (%):** No data available.
- Explosive limit - upper (%):** No data available.
- Explosive limit - lower (%):** No data available.
- Heat of combustion:** No data available.
- Vapor pressure:** < 1.33 hPa (20 °C)
- Vapor density:** Heavier than air
- Density:** 1.0070 g/cm³ (25 °C)
- Relative density:** No data available.
- Solubility(ies)**
- Solubility in water:** Dispersible
- Solubility (other):** No data available.
- Partition coefficient (n-octanol/water) Log Pow:** > 3.29 ; pH 5
 > 3.28 ; pH 7

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> 3.60 ; pH 9

Auto-ignition temperature: 334 °C
Decomposition temperature: No data available.
SADT: No data available.
Viscosity, dynamic: 24 mPa·s
Viscosity, kinematic: No data available.
VOC: 29.8 g/l

10. Stability and reactivity

Reactivity: No dangerous reaction if used as recommended.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: None known.

Incompatible Materials: None known.

Hazardous Decomposition Products: In case of fire, gives off (emits): Carbon oxides Oxides of silicon. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

11. Toxicological information

General information: Aerosols of this product have a high inhalation toxicity potential. Therefore, when spraying this product and mixtures thereof with other components, exposure must be completely avoided. The use of respiratory equipment is mandatory for all spray applications.

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

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Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat): > 2,000 mg/kg

Dermal

Product: LD 50 (Rat): > 2,000 mg/kg

Inhalation

Product: LC50 (Rat): > 11.78 mg/l [5% Diluted aqueous solution]
LC50 (Rat): 2 mg/l [Aerosols]

Repeated dose toxicity

Product: NOAEL (Rat, Oral, 28 d): 450 mg/kg

Skin Corrosion/Irritation

Product: (Rabbit): No skin irritation

Serious Eye Damage/Eye Irritation

Product: (Rabbit): Strongly irritating.

Respiratory or Skin Sensitization

Product: (Guinea Pig) Did not cause sensitization on laboratory animals.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: Ames-Test: negative (not mutagenic)
Chromosomal aberration: negative (not mutagenic)
Mammalian cytogenicity test: negative (not mutagenic)

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

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Other effects:

No adverse effects anticipated from available information. This material was not mutagenic in an Ames bacterial assay or in three mammalian test systems including the Chinese hamster ovary (CHO)/HGPRT gene mutation assay, a micronucleus cytogenetic assay in mice, and an in vitro mammalian cytogenetic test.

In a repeated skin application study with rats, this material caused moderate skin irritation which resolved during a post-application recovery period. There was no evidence for percutaneous cumulative or specific organ toxicity, and no effect on male or female reproductive systems. Findings from a 14-day dietary feeding study with rats show that high dosage repeated ingestion of this material causes reversible adverse effects on the male and female reproductive tracts. Additional effects seen include increased liver weight, altered blood cytology/chemistry, and thyroid enlargement (primarily hypertrophy, with some hyperplasia). Evidence of partial or complete recovery was found over a 28-day recovery period. Findings from a repeat 9-day aerosol inhalation toxicity study with rats show a no-observable-effect-level (NOEL) of less than 0.025 mg/l. Symptoms of toxicity included rales, gasping, ocular opacity, prostration, hypothermia, reduced body weight gain and food consumption, changes in clinical pathology, decreased thymus weight, and microscopic lesions in the nasal cavity. There was no effect on the male or female reproductive systems. It is not anticipated that the use of aqueous dilutions of this product would result in this type of aerosol exposure.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC50 (Zebra Fish, 96 h): 6.8 mg/l

Aquatic Invertebrates

Product: EC50 (Daphnia magna, 48 h): 25 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: EC50 (Algae (Pseudokirchneriella subcapitata), 96 h): 32 mg/l

Persistence and Degradability

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Biodegradation

Product: The product is not readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: > 3.29
Log Kow: > 3.28
Log Kow: > 3.60

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Polyalkyleneoxide modified Heptamethyltrisiloxane No data available.
Heptamethyltrisiloxane
Polyalkyleneoxide Modified Heptamethyltrisiloxane No data available.
Heptamethyltrisiloxane

Other adverse effects: No data available.

13. Disposal considerations

General information: See Section 8 for information on appropriate personal protective equipment. The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground.

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

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14. Transport information

DOT

UN Number:	UN 3082
UN Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.(Polyalkyleneoxide Modified Heptamethyltrisiloxane)
Transport Hazard Class(es)	
Class:	9
Label(s):	9
Packing Group:	III
Marine Pollutant:	Yes

IMDG

UN Number:	UN 3082
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Polyalkyleneoxide Modified Heptamethyltrisiloxane)
Transport Hazard Class(es)	
Class:	9
Label(s):	9
EmS No.:	F-A, S-F
Packing Group:	III
Marine Pollutant:	Yes
Limited quantity	5.00L
Excepted quantity	E1

IATA

UN Number:	UN 3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.(Polyalkyleneoxide Modified Heptamethyltrisiloxane)
Transport Hazard Class(es):	
Class:	9
Label(s):	9MI
Packing Group:	III
Cargo aircraft only Packing Instructions:	964
Passenger and cargo aircraft Packing Instructions:	964
Limited quantity:	30.00KG
Packing Instructions:	Y964
Excepted quantity	E1
Environmental Hazards:	Environmentally hazardous
Marine Pollutant:	Yes

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Special precautions for user: This substance/preparation meets the criteria of a Marine Pollutant (see IMDG paragraph 2.9.3.3) but is not identified in the IMDG Code (Marpol list). As such, substance/preparation shall be transported as a marine pollutant in accordance with the IMDG code.
 Keep away from food, drink and animal feeding stuffs.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Polyalkyleneoxide modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
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Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs
Heptamethyltrisiloxane Polyalkyleneoxide Modified	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

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Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Polyalkyleneoxide modified Heptamethyltrisiloxane

Polyoxyethylene mono methyl mono allyl ether

Polyalkyleneoxide Modified Heptamethyltrisiloxane

Polyalkylene Oxide

2-Propanol

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

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Inventory Status:

Australia AICS:	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	y (positive listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	y (positive listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	y (positive listing)	Remarks: None.
Canada NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	y (positive listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: None.
New Zealand Inventory of Chemicals:	y (positive listing)	Remarks: None.
Taiwan. Taiwan inventory (CSNN):	y (positive listing)	Remarks: None.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	2
Flammability	1
Physical Hazards	0
PERSONAL PROTECTION	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 04/12/2017
Revision Date: No data available.
Version #: 1.15
Further Information: No data available.

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Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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