SAFETY DATA SHEET

according to EC Regulation No. 453/2010, Annex II from 20.05.2010

Printing date: 08-01-2015 Revision: 08-01-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:
Product name: WINDSHIELD SEALANT SOLL SP18
Article number: SP18
1.2. Relevant identified uses of the substance or mixture and uses advised against: one-component adhesive for automotive industry.
1.3. Manufacturer/Supplier:
UAB HELVINA
Parko str. 96, Ramučiai
LT 54464 Kaunas district, Lithuania
Tel.: +370 37308901
Fax : +370 37308902
E-mail : info@helvina.lt
www.helvina.lt
1.4. Emergency telephone number:
Poison control and information office: Tel.: +370 5 236 2052 or +370 687 53378

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.
2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments
Hazard classification and indication:
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin. Sens. 1 H317 May cause an allergic skin reaction.
2.1.2. Directive 67/548/EEC and following amendments and adjustments
Danger Symbols: Xn
R phrases: 42/43
The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.
2.2. Label elements
Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.
Pictograms:

Warning: DANGER
Hazard statements:
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
EUH204 Contains isocyanates. May produce an allergic reaction.
Precautionary statements:
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P321 Specific treatment (see supplemental first aid instructions on this label).
P342+P311 If experiencing respiratory symptoms: call a POISON CENTER / doctor /…
P501 Dispose of contents / container to licensed, permitted incinerator, or other thermal destruction device.
Contains: DIPHENYLMETHANE-4,4'-DIISOCYANATE; HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER.
2.3. Other hazards.
Information not available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:
Information not relevant.
3.2. Mixtures:
Contains (Classification 67/548/EEC and 1272/2008 (CLP)):

CAS: 28182-81-2 EINECS: 500-060-2 Reg. No. 01-2119485796-17	Hexamethylene-1,6- diisocyanate homopolymer  Xn: R20;  Xi: R37, R43  Acute Tox. 4 H332,  STOT SE 3 H335; Skin Sens. 1, H317	4,5 - 5 %
CAS: 101-68-8 EINECS: 202-966-0 INDEX: 615-005-00-9	Diphenylmethane-4,4'- diisocyanate Carc. Cat. 3 R40,  Xn R20,  Xi R36/37/38, R42/43, R48/20, Note 2 C Carc. 2 H351,  Acute Tox. 4 H332,  STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315,  STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1, H317, Note 2 C	0,9 - 1 %

Note: Upper limit is not included into the range.
The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.
T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N =
Dangerous for the Environment(N)

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures.
EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.
4.2. Most important symptoms and effects, both acute and delayed.
For symptoms and effects caused by the contained substances, see chap. 11.
4.3. Indication of any immediate medical attention and special treatment needed.
Information not available.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media.
SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.
5.2. Special hazards arising from the substance or mixture.
HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.
5.3. Advice for firefighters.
GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health.

Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures.
Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.
6.2. Environmental precautions.
The product must not penetrate into the sewer system or come into contact with surface water or ground water.
6.3. Methods and material for containment and cleaning up.
Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.
6.4. Reference to other sections.
Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling.
Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.
7.2. Conditions for safe storage, including any incompatibilities.
Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.
Storage class TRGS 510 (Germany): 10
7.3. Specific end use(s).
Information not available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	Type	Country	TWA/8h		STEL/15min		
			mg/m^3	ppm	mg/m^3	ppm	
DIPHENYLMETHANE-4,4'-DIISOCYANATE	MAK	AUS	0,05	0,005	0,1	0,01	
	VLEP	BEL	0,052	0,005			
	AGW	DEU	0,05		0,05		
	MAK	DEU	0,05		0,05		Inhal.
	MAK	DEU	0,05		0,05		Skin
	VLA	ESP	0,052	0,005			
	VLEP	FRA	0,1	0,01	0,2	0,02	
	TLV	GRC	0,2		0,2		
	MDK	HRV	0,005	55			
	OEL	IRL	0,02		0,07		
	MAK	SWE	0,03	0,002	0,05(C)	0,005(C)	
	TLV-ACGIH		0,051	0,005			
DIISONONYL PHTHALATE	WEL	UK	5				
	OEL	IRL	5				

Legend:
(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS.
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Paste
Colour:	Black
Odour:	Characteristic
Odour threshold:	Not available
pH:	Not available
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	> 100°C
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Explosive limits:	Not available
Vapour tension:	Not available
Vapour density (air=1):	Not available
Relative density:	1,36 kg/l (20°C)
Solubility in water:	Not available
Solubility in organic solvents:	Not available
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available

Viscosity:	150000-250000 cps
Explosive properties:	Not available
Oxidising properties:	Not available

9.2. Other information:

VOC (Directive 1999/13/EC):	0
VOC (volatile carbon):	0

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity.
There are no particular risks of reaction with other substances in normal conditions of use.
DIPHENYLMETHANE-4,4'-DIISOCYANATE: decomposes at 274°C. With water it develops carbon dioxide and forms an insoluble solid polymer. Consequently any wet material recovered must be stored in open containers.
10.2. Chemical stability.
The product is stable in normal conditions of use and storage.
10.3. Possibility of hazardous reactions.
No hazardous reactions are foreseeable in normal conditions of use and storage.
DIPHENYLMETHANE-4,4'-DIISOCYANATE: can react dangerously with: alcohols, amines, ammonia, sodium hydroxide, acids, water and strong bases and acids.
10.4. Conditions to avoid.
None in particular. However the usual precautions used for chemical products should be respected.
10.5. Incompatible materials.
Information not available.
10.6. Hazardous decomposition products.
DIPHENYLMETHANE-4,4'-DIISOCYANATE: nitric oxides, carbon oxides, hydrogen cyanide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects.
In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.
Inhalation of this product causes sensitization, which may then give rise to a series of inflammatory episodes, most of all characterized by obstruction and affecting the respiratory system. Sometimes, sensitization phenomena arise together with evident rhinitis and asthma. Damages to the respiratory system depend on the inhaled quantity, on the product concentration in the working environment and on the exposure time.
Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, edemas, papules, vesicles, pustules, scurvies, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, edemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

DIPHENYLMETHANE-4,4'-DIISOCYANATE: risk of sensitization even at concentrations lower than TLV in case of spray working.
HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

LD50 (Oral)	> 2500 mg/kg Rattus sp.
LD50 (Dermal)	> 2000 mg/kg Oryctolagus sp.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

LD50 (Oral)	> 2000 mg/kg Rattus sp.
LD50 (Dermal)	> 9400 mg/kg Oryctolagus sp.
LC50 (Inhalation)	2,24 mg/l Rattus sp.

SECTION 12. ECOLOGICAL INFORMATION

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

12.1. Toxicity.

HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Scenedesmus sp.
Chronic NOEC for Fish	> 100 mg/l Danio rerio
Chronic NOEC for Crustacea	> 100 mg/l Daphnia magna

DIPHENYLMETHANE-4,4'-DIISOCYANATE

LC50 - for Fish	> 1000 mg/l/96h Danio rerio
Chronic NOEC for Algae / Aquatic Plants	1640 mg/l Desmodesmus subspicatus

12.2. Persistence and degradability.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Solubility in water	mg/l 0,1 - 100

NOT rapidly biodegradable.

12.3. Bioaccumulative potential.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Partition coefficient: n-octanol/water.	4,51

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

Information not available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. TRANSPORT INFORMATION

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not dangerous for transport.

Irritating to skin or eyes.

Protect from moisture.
Keep away from foodstuffs, acids and alkalis.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso category. None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.

Point. 3

Contained substance

Point 52 DIISONONYL PHTHALATE

Point 56 DIPHENYLMETHANE-4,4'-DIISOCYANATE

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisarion (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (VwVwS 2005).

WGK 2: Hazard to waters

15.2. Chemical safety assessment:

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Carc. 2	Carcinogenicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
H351	Suspected of causing cancer.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
EUH204	Contains isocyanates. May produce an allergic reaction.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
Carc. Cat. 3	Carcinogenicity, category 3.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitization by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EU) 1907/2006 (REACH) of the European Parliament
4. Regulation (EU) 1272/2008 (CLP) of the European Parliament
5. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EU) 453/2010 of the European Parliament
7. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
9. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
10. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
11. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances

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- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.