SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Sikaflex® SOLO

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use : Adhesive

1.3 Details of the supplier of the safety data sheet

Company name of supplier	:	Sika Poland Spółka z o.o. Karczunkowska 89 02-871 Warszawa
Telephone	:	+48 22 27 28 700
Telefax	:	+48 22 27 28 800
E-mail address of person responsible for the SDS	:	EHS@pl.sika.com

1.4 Emergency telephone number

112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements : **Prevention:**

P261	Avoid breathing mist or vapours.
P284	In case of inadequate ventilation wear respiratory protection.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Disposal:

P501	Dispose of contents/container in accordance with local regulation.

Hazardous components which must be listed on the label:

4,4'-methylenediphenyl diisocyanate
m-tolylidene diisocyanate

Additional Labelling

"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0 615-005-00-9 01-2119457014-47-XXXX	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 --- specific concentration limit Eye Irrit. 2; H319 >= 5 % --- specific concentration limit STOT SE 3; H335 >= 5 % --- specific concentration limit Skin Irrit. 2; H315 >= 5 % --- specific concentration limit Resp. Sens. 1; H334 >= 0,1 % --- Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,5 mg/l	>= 0,5 - < 1

m-tolylidene diisocyanate	26471-62-5 247-722-4 615-006-00-4 01-2119454791-34-XXXX	Acute Tox. 1; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412 --- specific concentration limit Resp. Sens. 1; H334 >= 0,1 % --- Acute toxicity estimate Acute inhalation toxicity (vapour): 0,107 mg/l	>= 0,025 - < 0,1
Substances with a workplace exposure limit :			
bis(2-ethylhexyl) adipate	103-23-1 203-090-1 01-2119439699-19-XXXX		>= 5 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.

Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Asthmatic appearance
Allergic reactions
See Section 11 for more detailed information on health effects and symptoms.

Risks : sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Deny access to unprotected persons.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid exceeding the given occupational exposure limits (see section 8). For personal protection see section 8. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations.
Further information on storage stability	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	Cleaning with aprotic polar solvents must be avoided. Consult most current local Product Data Sheet prior to any use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form	Control parame-	Basis *

		of exposure)	ters *	
bis(2-ethylhexyl) adipate	103-23-1	NDS	400 mg/m3	PL OEL
4,4'-methylenediphenyl diisocyanate	101-68-8	NDS	0,03 mg/m3	PL OEL
		NDSch	0,09 mg/m3	PL OEL
m-tolylidene diisocyanate	26471-62-5	NDS	0,007 mg/m3	PL OEL
		NDSch	0,021 mg/m3	PL OEL
		TWA	0,01 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
		STEL	0,02 mg/m3 (NCO)	98/24/EC I

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

8.2 Exposure controls

Appropriate engineering controls

Maintain air concentrations below occupational exposure standards.
Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection : Safety glasses with side-shields conforming to EN166

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (> 0,1 mm)
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.

Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection : In case of inadequate ventilation wear respiratory protection.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
organic vapor filter (Type A)
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in par-

ticular to the mixing / stirring area. In case this is not sufficent to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Form	:	paste
Colour	:	black
Odour	:	slight
Melting point/ range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flammability (solid, gas)	:	No data available

Upper/lower flammability or explosive limits

Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 101 °C Method: closed cup
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)

Viscosity

Viscosity, kinematic	:	> 20,5 mm2/s (40 °C)

Solubility(ies)

Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	0,01 hPa

Density	:	ca. 1,31 g/cm3 (20 °C)
Relative vapour density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.

Components:

4,4'-methylenediphenyl diisocyanate:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50: 1,5 mg/l

Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Calculation method

m-tolylidene diisocyanate:

Acute inhalation toxicity : LC50 (Rat): 0,107 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute toxicity estimate: 0,107 mg/l
Test atmosphere: vapour
Method: Calculation method

bis(2-ethylhexyl) adipate:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified due to lack of data.

Serious eye damage/eye irritation

Not classified due to lack of data.

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

Not classified due to lack of data.

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration hazard
Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

bis(2-ethylhexyl) adipate:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 500 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus quadricauda (Green algae)): > 500 mg/l Exposure time: 72 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation

(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The generation of waste should be avoided or minimized wherever possible.
Empty containers or liners may retain some product residues.
This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
REACH Information:		All substances contained in our Products are - registered by our upstream suppliers, and/or - registered by us, and/or - excluded from the regulation, and/or - exempted from the registration.
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Number on list 20: dioctyltin dilaurate Number on list 52: 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich Number on list 56: 4,4'-methylenediphenyl diisocyanate Number on list 74: 4,4'-methylenediphenyl diisocyanate, m-tolylidene diisocyanate Number on list 75
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	None of the components are listed (=> 0.1 %).

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Volatile organic compounds	:	Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) no VOC duties Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) Not applicable

Other regulations:

Act of February 25, 2011 on chemical substances and their mixtures (i.e. Journal of Laws of 2020, item 2289)

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Official Journal of the European Union L 353 from 31.12.2008) with further adaptation to technical progress (ATP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Official Journal of the European Union L 396 from 30.12.2006, as amended).

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Ordinance of the Minister of Family, Labour and Social Policy of 12 June 2018 concerning the

highest allowable concentrations and levels of the agents harmful for health in the workplace (Dz.U 2018 pos 1286, with later amendments).

Ordinance of the Minister of Health of 2nd February 2011 concerning tests and measurement of agents harmful for health in the workplace (Dz. U. Nr. 33, item 166 with later amendments).

Ordinance of the Minister of Health of 30th December 2004 on the health and safety of workers related to chemical agents at work (consolidated text, Journal of Laws 2016 no. 0 item 1488)

Act of 14 December 2012. on Waste (Journal of Laws of 2013. pos. 21, as amended).

Act of 13 June 2013. On packaging and packaging waste (Journal. U. of 2013. Item. 888, as amended).

Ordinance of the Minister of Climate of 2nd January 2020 on Waste Catalog (Dz. U. 2020 item 10).

Ordinance of the Minister of Environment on the requirements for carrying out the process of thermal treatment of waste and how to deal with waste produced in the process. (Dz. U. of 2016., Pos. 108)

Act of 19 August 2011 on transport of dangerous goods (Dz. U. Nr. 227, item 1367, as amended).

Government Statement of February 15, 2021 on the entry into force of amendments to Annexes A and B to Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), drawn up in Geneva on September 30, 1957 (Journal of Laws 202 poz.874 as amended)

Act of July 29, 2005 on drug addiction prevention (Journal of Laws of 2005, No. 179, item 1485, with later amendments)

Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Full text of H-Statements

H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.

H351	:	Suspected of causing cancer.
H373	:	May cause damage to organs through prolonged or repeated exposure if inhaled.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
98/24/EC I	:	Europe. Chemical Agents Directive - Annex I: Binding occupational exposure limit values
PL OEL	:	Ordinance of the Minister of Family, Labour and Social Policy of 12 June 2018 concerning the highest allowable concentrations and levels of the agents harmful for health in the workplace (Dz.U 2018 pos 1286, with later amendments)
98/24/EC I / STEL	:	Limit values Short-term
98/24/EC I / TWA	:	Limit values 8 hours
PL OEL / NDS	:	Maximal Admissible Concentration
PL OEL / NDSch	:	Maximal Admissible Temporary Concentration
ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	:	Chemical Abstracts Service
DNEL	:	Derived no-effect level
EC50	:	Half maximal effective concentration
GHS	:	Globally Harmonized System
IATA	:	International Air Transport Association
IMDG	:	International Maritime Code for Dangerous Goods
LD50	:	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	:	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	:	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	:	Occupational Exposure Limit
PBT	:	Persistent, bioaccumulative and toxic
PNEC	:	Predicted no effect concentration
REACH	:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	:	Substances of Very High Concern
vPvB	:	Very persistent and very bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Resp. Sens. 1	H334	Calculation method

The information contained in this Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.

Changes as compared to previous version !

PL / EN