according to Regulation (EC) No. 1907/2006

## Sikaflex®-TS Plus



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

1.1 Product identifier

Trade name : Sikaflex®-TS Plus

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

Product use : Sealant/adhesive

1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Limited

Watchmead Welwyn Garden City

Hertfordshire. AL7 1BQ

Telephone : +44 (0)1707 394444
Telefax : +44 (0)1707 329129
E-mail address of person responsible for the SDS : EHS@uk.sika.com

1.4 Emergency telephone number

+44 (0)1707 363899 (available during office hours).

#### **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 dust/ fume/ gas/ mist/ va-

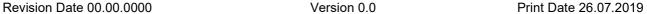
pours/ spray.

P284 In case of inadequate ventilation wear respir-

atory protection.

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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

#### **Additional Labelling**

EUH204 Contains isocyanates. May produce an allergic reaction.

#### 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.

## **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

#### Components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Registration number		
Urea,N,N"-(methylenedi-4,1-	77703-56-1	Aquatic Chronic 4;	>= 2,5 - < 5
phenylene)bis[N'-butyl-	416-600-4	H413	
	01-0000016345-72-		
	XXXX		
4,4'-methylenediphenyl diisocya-	101-68-8	Acute Tox. 4; H332	>= 0,1 - < 1
nate	202-966-0	Eye Irrit. 2; H319	
	01-2119457014-47-	STOT SE 3; H335	
	XXXX	Skin Irrit. 2; H315	
		Resp. Sens. 1; H334	
		Skin Sens. 1; H317	
		Carc. 2; H351	
		STOT RE 2; H373	

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

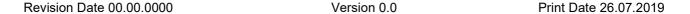
General advice : Move out of dangerous area.

Consult a physician.

Show this safety data sheet to the doctor in attendance.

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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.

: Remove contact lenses. In case of eye contact

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 difficul-

ties 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 diox-

ide/sand/foam/alcohol resistant foam/chemical powder for

extinction.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion prod- : No hazardous combustion products are known

ucts

5.3 Advice for firefighters

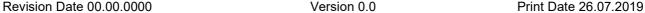
Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

for firefighters

Further information : Standard procedure for chemical fires.

according to Regulation (EC) No. 1907/2006

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#### **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 : Do not breathe vapours or spray mist.

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 ap-

plication 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 stor-

age stability

No decomposition if stored and applied as directed.

according to Regulation (EC) No. 1907/2006

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7.3 Specific end use(s)

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Specific use(s) : 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 of exposure)	Control parame- ters *	Basis *	
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0,02 mg/m3 (NCO)	GB EH40	
Further information	asthmagens and airway hyper-res anism. Once the sure to the subs respiratory symprunny nose to as will become hyp those who are lil cause occupation which may trigge airway hyper-res selves. The latte tory sensitisers. Asthmagen? Cri in occupational at o substances the Where this is no ards of control to substances that exposure be red giving rise to she attention when r is appropriate for substance which appropriate considegree of risk are asthma., The 'Sethose substance ries shown in Tain these tables in	can cause occupation of respiratory sensitises open siveness via an interpretation of the sensitise sponsiveness via an interpretation of the symptoms. These symptoms of the symptoms of asterior of the symptoms of the	rs) can induce a stammunological irritant the hyper-responsive en in tiny quantities, ms can range in several sections are exposed to see impossible to identer the expossible that it is the expossible to a possible to identer the expossible to identer the expossible to be expossible to identer the expos	the of specific at or other mech-, further expo- may cause verity from a or a sensitiser tify in advance ances that can substances a pre- existing the disease them- agens or respirated cable, exposure do be prevented be prevented. Sequate standesponsive. For a requires that tole. Activities are should be the essional over the fing occupational assigned only to in the catego- er substances not	
Further information		L can cause occupation respiratory sensitise	nal asthma (also kn		
	airway hyper-res	asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further expo-			
	sure to the subs	sure to the substance, sometimes even in tiny quantities, may cause			
	runny nose to as	respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser			
	will become hyper-responsive and it is impossible to identify in advance				

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those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre- existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.

#### **Biological occupational exposure limits**

Substance name	CAS-No.	Control parame- ters	Sampling time	Basis
4,4'-methylenediphenyl diisocyanate	101-68-8	urinary diamine (Isocyanates): 1 µmol/mol creati- nine (Urine)	Post task	GB EH40 BAT

## 8.2 Exposure controls

## Personal protective equipment

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

Eye wash bottle with pure water

Hand protection : Chemical-resistant, impervious gloves complying with an ap-

proved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manu-

facturer specifications.

Suitable for short time use or protection against splashes:

Butyl rubber/nitrile rubber gloves (0,4 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,

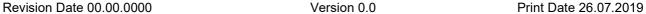
long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing

and stirring work.

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

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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 work-

ing 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 as-

sessment 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 particular 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

**Appearance** paste

Colour various

Odour slight

Odour Threshold No data available

No data available pН

Melting point/range / Freezing : No data available

point

: No data available Boiling point/boiling range

: > 101 °C Flash point

Method: closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper : No data available

flammability limit

Lower explosion limit / Lower : No data available

flammability limit

according to Regulation (EC) No. 1907/2006

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Vapour pressure : 0,01 hPa

Relative vapour density : No data available

Density : ca. 1,25 g/cm3 (20 °C)

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : ca. 90.000 mPa.s (20 °C)

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

Explosive properties : No data available

Oxidizing properties : 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 : Avoid moisture.

10.5 Incompatible materials

Materials to avoid : No data available

#### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

according to Regulation (EC) No. 1907/2006

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## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### **Acute toxicity**

Not classified based on available information.

#### **Components:**

#### 4,4'-methylenediphenyl diisocyanate:

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

Test atmosphere: dust/mist Method: Expert judgement

#### Skin corrosion/irritation

Not classified based on available information.

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

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

#### Germ cell mutagenicity

Not classified based on available information.

#### Carcinogenicity

Not classified based on available information.

#### Reproductive toxicity

Not classified based on available information.

#### STOT - single exposure

Not classified based on available information.

#### STOT - repeated exposure

Not classified based on available information.

#### **Aspiration toxicity**

Not classified based on available information.

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

#### **Components:**

Urea, N, N"-(methylenedi-4, 1-phenylene)bis[N'-butyl-:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 250 mg/l

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Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Raphidocelis subcapitata (freshwater green alga)): >

100 ma/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 Other adverse effects

#### **Product:**

mation

Additional ecological infor- : 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

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.

08 04 09\* waste adhesives and sealants containing organic European Waste Catalogue

solvents or other dangerous substances

according to Regulation (EC) No. 1907/2006

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Contaminated packaging : 15 01 10\* packaging containing residues of or contaminated

by dangerous substances

## **SECTION 14: Transport information**

#### 14.1 UN number

Not regulated as a dangerous good

#### 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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 - 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 (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

Regulation (EC) No 850/2004 on persistent organic pol-

lutants

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:

Number on list 3

according to Regulation (EC) No. 1907/2006

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1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich

(Number on list 52)

4,4'-methylenediphenyl diisocyanate

(Number on list 56)

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/orexempted from the registration.

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 : Law on the incentive tax for volatile organic compounds

(VOCV)

Volatile organic compounds (VOC) content: 0,83 %

no VOC duties

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0,83 %

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environmental regulation/legislation specific for the substance or mixture: : Environmental Protection Act 1990 & Subsidiary Regulations Health and Safety at Work Act 1974 & Subsidiary Regulations Control of Substances Hazardous to Health Regulations

(COSHH)

May be subject to the Control of Major Accident Hazards

Regulations (COMAH), and amendments.

#### 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.

H332 : Harmful if inhaled.

H334 : May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

H335 : May cause respiratory irritation. H351 : Suspected of causing cancer.

according to Regulation (EC) No. 1907/2006

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H373 : May cause damage to organs through prolonged or repeated

exposure.

H413 : May cause long lasting harmful effects to aquatic life.

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 GB EH40 : UK. EH40 WEL - Workplace Exposure Limits GB EH40 BAT : UK. Biological monitoring guidance values

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADR : European Agreement concerning the International Carriage of

Dangerous Goods by Road Chemical Abstracts Service

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.

according to Regulation (EC) No. 1907/2006

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Changes as compared to previous version!

GB / EN