Safety Data Sheet according to (EC) No 1907/2006

sds no. : 98148
V003.0

TEROSTAT 8596 DK 310ML

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

1.1. Product identifier
TEROSTAT 8596 DK 310ML

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Direct Glazing Adhesive

1.3. Details of the supplier of the safety data sheet
Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 (211) 797 0
Fax-no.: +49 (211) 798 4008

ua-productsafety.de@henkel.com

1.4. Emergency telephone number
The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):
No data available.

Classification (DPD):
Sensitizing
R42 May cause sensitization by inhalation.

2.2. Label elements

Label elements (CLP):
No data available.

Label elements (DPD):

Xn - Harmful

Risk phrases:

R42 May cause sensitization by inhalation.

Safety phrases:

S2 Keep out of the reach of children.
S23 Do not breathe vapour.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51 Use only in well-ventilated areas.

Additional labeling:

Contains isocyanates. See information supplied by the manufacturer.

Contains:

4,4'- methylenediphenyl diisocyanate

2.3. Other hazards

Persons suffering from allergic reactions to isocyanates should avoid contact with the product.

SECTION 3: Composition/information on ingredients

General chemical description:

Adhesive

Base substances of preparation:

Isocyanate

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
4,4'- methylenediphenyl diisocyanate 101-68-8	202-966-0 01-2119457014-47	< 1 %	Carcinogenicity 2 H351 Acute toxicity 4; Inhalation H332 Specific target organ toxicity - repeated exposure 2 H373 Serious eye irritation 2 H319 Specific target organ toxicity - single exposure 3 H335 Skin irritation 2 H315 Respiratory sensitizer 1 H334 Skin sensitizer 1 H317

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
4,4'- methylenediphenyl diisocyanate 101-68-8	202-966-0 01-2119457014-47	< 1 %	Xi - Irritant; R36/37/38 R42/43 carcinogenic, category 3; R40 Xn - Harmful; R20, R48/20

For full text of the R-Phrases indicated by codes see section 16 'Other Information'.
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Fresh air, oxygen supply, warmth; seek specialist medical attention.
Delayed effects possible after inhalation.

Skin contact:
Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed
May cause sensitization by inhalation.

An allergic reaction cannot be excluded after repeated skin contact.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
In case of fire toxic gases can be released.

5.3. Advice for firefighters
Wear protective equipment.
Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment.
Avoid contact with skin and eyes.
Keep unprotected persons away.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove mechanically.
Dispose of contaminated material as waste according to Chapter 13.

6.4. Reference to other sections

See advice in chapter 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures:
Do not eat, drink or smoke while working.
Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.
Store in a cool, well-ventilated place.
Container must be made airtight after use.
Storage at 15 to 20°C is recommended.

7.3. Specific end use(s)

Direct Glazing Adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient	ppm	mg/m³	Type	Category	Remarks
4,4'-Methylenediphenyl diisocyanate 101-68-8		0,05	AGW:	=2= If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8			STEL factor:	1 Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values.	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (freshwater)					> 1 mg/L	
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (marine water)					> 0,1 mg/L	
4,4'- methylenediphenyl diisocyanate 101-68-8	soil				> 1 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	STP					> 1 mg/L	
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (intermittent releases)					10 mg/L	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	dermal	Acute/short term exposure - systemic effects		50 mg/kg bw/day	
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	inhalation	Acute/short term exposure - systemic effects		0,1 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	dermal	Acute/short term exposure - local effects		28,7 mg/cm2	
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	inhalation	Acute/short term exposure - local effects		0,1 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	inhalation	Long term exposure - systemic effects		0,05 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	worker	inhalation	Long term exposure - local effects		0,05 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	dermal	Acute/short term exposure - systemic effects		25 mg/kg bw/day	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	inhalation	Acute/short term exposure - systemic effects		0,05 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	oral	Acute/short term exposure - systemic effects		20 mg/kg bw/day	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	dermal	Acute/short term exposure - local effects		17,2 mg/cm2	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	inhalation	Acute/short term exposure - local effects		0,05 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	inhalation	Long term exposure - systemic effects		0,025 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	general population	inhalation	Long term exposure - local effects		0,025 mg/m3	

Biological Exposure Indices:

Ingredient	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
4,4'-Methylenediphenyl diisocyanate 101-68-8	4,4-Diaminodiphenylmethane	Creatinine in urine	Sampling time: End of shift.	10 µg/g	DE BAT	BAT values reflect the total physical load of workplace substances absorbed through inhalation, dermally, etc. With occupational exposure to MDI, parameter 4,4'-Diaminodiphenylmethane (MDA) in the urine covers all components of a complex MDI mixture, since both monomers and oligomers of the MDI are degraded independent of the exposure path of the monomerous MDI. In contrast, the MAK value for MDI takes into account only the monomer MDI portion.	

8.2. Exposure controls:

Engineering controls:
Use only in well ventilated areas.

Respiratory protection:
Suitable breathing mask when there is inadequate ventilation.

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Goggles which can be tightly sealed.

Skin protection:
Wear protective equipment.
Protective clothing that covers arms and legs.

Advices to personal protection equipment:
Use only personal protection that's CE-labelled according to the regulation no. 819 of 19 August 1994.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	paste pasty black
Odor	odorless
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	1,2 g/cm3
Bulk density	No data available / Not applicable
Viscosity (; 20 °C (68 °F); Conc.: 100 % product)	4.000 pa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Reaction with water, alcohols, amines.
Reacts with water: Pressure built up in closed vessel (CO2).

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
Temperatures over appr. 250 °C
Humidity

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!
At higher temperatures isocyanate may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.
Persons suffering from allergic reactions to isocyanates should avoid contact with the product.

Sensitizing:

May cause sensitization by inhalation.
An allergic reaction cannot be excluded after repeated skin contact.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 2.000 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LC50	> 2,24 mg/l	inhalation		rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
4,4'- methylenediphenyl diisocyanate 101-68-8	sensitising		guinea pig	

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

Carcinogenicity:

Hazardous components CAS-No.	Result	Species	Sex	Exposure timeFrequency of treatment	Route of application	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	not carcinogenic	rat	male/female	main groups: 2 years; satel... 6 hours/day; 5 days/week	inhalation: aerosol	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

SECTION 12: Ecological information

General ecological information:

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.
Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LC0	> 3.000 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	129,7 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 1.640 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
4,4'- methylenediphenyl diisocyanate 101-68-8		aerobic	0 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
4,4'- methylenediphenyl diisocyanate 101-68-8		92	28 d	Cyprinus carpio		OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	5,22					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
4,4'- methylenediphenyl diisocyanate 101-68-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
The valid EEC waste code numbers are not product-related but are largely source-related. These can be requested from the manufacturer.

In consultation with the responsible local authority, must be subjected to special treatment.

SECTION 14: Transport information

14.1. UN number

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.4. Packaging group

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content (VOCV 814.018 VOC regulation CH)	0 %

VOC Paints and Varnishes (EU):

Product (sub)category:	This product is not a subject of the Directive 2004/42/EC

15.2. Chemical safety assessment
A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK:	2, water-endangering product. (German VwVwS of July 27, 2005) Classification in conformity with the calculation method
BG regulations, rules, infos:	BG data sheet: BGI 524 Hazardous substances: polyurethane production and processing / isocyanates (M 044)
Storage class according to TRGS 510:	10

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitization by inhalation and skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
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 difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.