

Material Safety Data Sheet
Trade name: **TigerBind-Star Rubber Environmental Ltd**
According to 2001/58/EC

Page 1/5

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1 Identification of substance

Product details

Trade name: TigerBind – Issued To Star Rubber Environmental Ltd

Manufacturer/Supplier:

Stockmeier Urethanes GmbH & Co. KG
Eckendorfer Straße 10
33609 Bielefeld
Tel.: 0049-521-3037-0

Informing department: Product development department

Emergency information:

During normal opening times: Product development department

Telephone 0049-521-3037-129

Material uses: Component of a Polyurethane System

2 Composition/Data on components:


Chemical characterisation

Description: Prepolymer based on diphenylmethanediisocyanate / isomers and homologues

Dangerous components:

CAS NO.	Designation	Index	R-phrases	Concentration
9016-87-9	Diphenylmethanediisocyanate isomers/homologues	Xn	36/37/38-20-42/43	< 25 %

3 Hazards identification

Hazard designation:	Information pertaining to particular dangers for man and environment	
	R 36/37/38 R 20 R 42/43	Irritating to eyes, respiratory system and skin. Harmful by inhalation. May cause sensitisation by inhalation and skin contact.
Xn		

Additional information:

For their own protection, persons who suffer from hypersensitivity of the respiratory tract (e.g. asthmatics and chronic bronchitis sufferers) should avoid handling this product.

4 First aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if

Material Safety Data Sheet
Trade name: **TigerBind-Star Rubber Environmental Ltd**
According to 2001/58/EC

Page 2/5

symptoms persist. In case of unconsciousness bring patient into stable side position for transport.

After skin contact

Instantly wash with water and soap and rinse thoroughly for several minutes. Consult doctor if irritation persists.

After eye contact

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult doctor.

After swallowing

DO NOT induce the patient to vomit. In case of persistent symptoms consult doctor.

5 Fire fighting measures

Suitable extinguishing agents

CO₂, extinguishing powder, halones. In case of larger fires, water spray should be used.

For safety reasons unsuitable extinguishing agents

Water with a full water jet.

Special hazards caused by the material, its products of combustion or flue gases:

In case of fire, formation of carbon monoxide, nitrogen oxide, isocyanate vapour and traces of hydrogen cyanide is possible. Firemen have to wear self-contained breathing apparatus.

Protective equipment: Put on breathing apparatus.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Prevent material from reaching sewage system, holes and cellars.

Measures for cleaning/collecting:

Absorb with fluid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to item 13. Transfer to waste container after approx. 1 hour. Keep damp in the open air in a safe place (CO₂-formation!) for a few days; the waste can then be disposed of on approved landfill or a special refuse dump. Ensure adequate ventilation.

7 Handling and storage

Handling

Information for safe handling:

Keep containers tightly closed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Exhaust ventilation required during spraying or at raw material temperatures above 40°C.

Storage

Requirements to be met by store rooms and containers:

Keep container tightly closed and dry. Avoid product temperatures above +40°C and below 5°C. Keep away from foodstuffs and drinks.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Storage class

Water hazard class (KBwS): 1 - slightly hazardous to water (KBwS).

Material Safety Data Sheet
 Trade name: **TigerBind-Star Rubber Environmental Ltd**
 According to 2001/58/EC

8 Exposure controls and personal protection

Additional information about design of technical systems:
 No further data; see item 15.

Components with critical values that require monitoring at the workplace:

CAS No.	Designation of material	%	Type	Value	Unit
9016-87-9	MDI	-	MAK	0,005	ppm

Personal protective equipment

General protective and hygienic measures:

Keep away from acids, alkali and oxidants.
 Instantly remove any soiled and impregnated garments.
 Wash hands during breaks and at the end of the work.

Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus (German type A2-P2). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Protection of hands: Protective gloves made of neoprene or nitrilic rubber.

Eye protection: Tightly sealed safety glasses.

Body protection: Wear suitable protective clothing.

9 Physical and chemical properties:

Form:	liquid
Colour:	brown
Smell:	earthy, musty

Change in condition	Value/Range	Unit	Method
Setting point:	< 0	°C	
Boiling point/Boiling range:	Not determined		
Flash point	> 200	°C	DIN 51755
Ignition temperature:	> 400	°C	
Self-inflammability:	Product is not selfigniting		
Danger of explosion:			
Steam pressure:	at 20°C	< 0,00001	mbar
Density	at 20°C	1.09	g/cm ³
Solubility in / Miscibility with water:	at 20°C	unsol., reacts	g/l
Viscosity:	at 20°C	6500	mPas
			DIN 53018/1+2

10 Stability and reactivity

Dangerous products of composition:

No dangerous decomposition products when stored and handled correctly.

Additional information:

Hazardous reactions: Exothermic reaction with amines and alcohols; reacts with water forming CO₂, in closed containers risk of bursting owing to increase of pressure.

11 Toxicological information

Acute toxicity:

LD 50 /LC 50 values that are relevant for classification:

Components	Type	Species	Value
MDI	LD 50, oral	rat	> 15000 mg/kg
	LC 50, inhalation	rat	inhalation, 370 mg as aerosol/m ³ , 4 h of exposure.

Material Safety Data Sheet
Trade name: **TigerBind-Star Rubber Environmental Ltd**
According to 2001/58/EC

Page 4/5

Skin and mucous membrane compatibility, rabbit:
Skin 4 hours exposure - slight reddening for a short time
Eyes - moderate reddening

Primary irritant effect:

On the skin: Irritant for skin and mucous membranes.

On the eye: Lacrimation, burning, considerable irritation of the outer eye.

Respiration System (aerosol, vapour in high concentration):

Irritation of the mucous membranes in the nose, throat and lungs, dryness of the throat, pressure on the chest, sometimes accompanied by breathing difficulties and headaches. Delayed appearance of the symptoms and allergic reaction in susceptible persons possible.

Sensitisation: Sensitisation possible by inhalation and skin contact.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

12 Ecological information:

General notes:

Do not allow product to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil. Reacts with water at the interface producing CO₂ and forming a solid and insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

13 Disposal considerations

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Waste disposal number:

According AVV: 08 05 01* (SAV 1)

Uncleaned packagings:

Empty containers may only be disposed of after neutralising any product remaining on the walls of the containers with a mixture of isopropanol, ammonia and water and removal of the warning labels.

Recommendation:

Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

ADR/RID-GGVS/E Class: -

Number/Letter: -

UN-Number: -

Designation of goods: -

Inland shipping ADN/ADR: -

ADN/R Class: -

Number/Letter: -

Category: -

Material Safety Data Sheet

Trade name: **TigerBind-Star Rubber Environmental Ltd**

According to 2001/58/EC

Page 5/5

Maritime transport IMDG/GGVSea:
IMDG/GGVSea Class: -
Page: -
UN Number: -
EMS Number: -
Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: -
UN/ID Number: -
Packaging group: -
Correct technical name: not restr.

Remarks:

No dangerous cargo. Keep away from foodstuffs and drinks. Avoid product temperatures above +40°C and below 5°C. Keep away from acids, alcali and oxidants.

15 Regulatory information

Classification/Labelling regulations:

Designation according to EC guidelines:

Labelling in accordance with Annex I of directive 67/548/EEC and its amendments and adaptations:

Code letter and hazard designation of product: Xn, Harmful

Contains: Diphenylmethanediisocyanate, isomeres (homologues)

Risk phrases:

R 20	Harmful by inhalation.
R 36/37/38	Irritation to eyes, respiratory system and skin.
R 42/43	May cause sensitisation by inhalation and skin contact.

Safety phrases:

S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28	After contact with skin, wash immediately with plenty of water and soap.
S 38	In case of insufficient ventilation, wear suitable respiratory equipment.
S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations

Classification according to VbF:

German Regulation on Flammable Liquids (VbF) according to § 2.4 not applicable.

Other regulations, limitations and prohibitive regulations

German MAK-values (TRGS 900):

- MDI: 0,005 ppm (ml/m³) corresp. to 0,05 mg/m³ (eight hours average value)
Peak concentration limit according to Category I

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing data specification sheet:

Product development department.

Contact: Dr. A. Möhrke; Dr. Jörg Urschey