Transspeed HD 2K Hardened SAFETY DATA SHEET

VERSION 5.8
Date: 7/1/2020
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

1.2 Relevant identified uses of the substance or mixture and uses advised against use
Hardener for coating materials adhesives for industrial and trade applications

Uses advised against:
Not suitable for use in homew orker(DIY) applications.

1.3 Details of the supplier of the safety data sheet

KSC INDUSTRIES (M) SDN BHD
No 16 Jalan Sungai Jeluh 32/189, Bukit Naga,
Seksyen 32, 40460 Shah Alam Selangor
Tel:+60351668790
Email:info@ksc-monatec.com

SECTION 2: Composition/information on ingredients

Type of product:Mixture

2.2 Mixtures
hydrophilic aliphatic polyisocyanate

Hazardous components

hydrophilic aliphatic polyisocyanate based on HDI
Concentration [w t.-%] : ca.100
CAS-NO.:666723-27-9
Classification (1272/2008/CE0 :Acute Tox 4 Inhalative H332 Skin Sens.1B H317 STOT SE 3 H335
Aquatic Chronic 3 H412

SECTION 3: First aid measures

3.1 Description of first aid measures

General advise: Take off all contaminated clothing immediately.

If inhaled: Take the person into the fresh air and keep him w arm,let him rest; if these is diffiulty in breathing, medical advice is required.

In case of skin contact : In case of skin contact w ash affected areas thoroughly w ith soap and plenty of w ater.Consult a doctor in the event of a skin reaction.

In case of eye contact: Hold the
eyes open and rinse w ith preferably
lukew arm w ater for a sufficiently
long period of time (at least 10
minutes) . Contact an
ophthalmologist.

If swallowed:DO NOT induce the patient to vomit, medical advice is required

3.2Most important symptoms and effects,both acute and delayed
Notes to physician: Basic first aid,decontamination,symptomatic treatment.

3.3 Indication of any immediate medical attention and special treatment needed Therapeautic measures: No information available.

SECTION 4:FIREFIGHTING MEASURES

4.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide (CO2) ,foam,extinguishing pow der, in cases of larger fires, w ater spray should be used.

Unsuitable extinguishing media: High volume w ater jet

4.2 Special hazards arising from the substance or mixture

Burning rekeases arbn
monoxide,carbon dioxide,oxides of
nitrogen,isocyanate vapors and
traces of hydrogen cyanide.In the
event of fire and/or explosion do not
breathe fumes.

4.3 Advice for fire-fighters

During fire-fighters respirator w ith independent air-supply and airtight garment is required.

Do not allow contaminated extinguishing w ater to enter the soil,ground-w ater of surfae w aters.

SECTION 5:Accidental release measures

5.1 Personal precautions,protective equipment and emergency procedures.

Put on protective equipment (see section 8).Ensure adequate ventilation/exhaust extraction.Keep unauthorized persons aw ay.

5.2 Environment related measures
Do not allow to escape info w aterw ays,w astew ater or soil

5.3 Methods and material for containment and cleaning up

Remove mechanically;cover the
remainder w ith w et,absorbent
material (e.g.saw dust,chemical
binder based on calcium silicate
hydrate,sand).After approx.One
hour transfer to w aste container
and do not seal(evolution of
CO2!.Keep damp in a safe ventilated
area for several days.

5.4 Reference to other sections
For further disposal measures see section 13.

SECTION 6:Handling and storage

6.1 Precautions for safe handling

Provide sufficient air exchange and../or exhaust in w ork rooms.Exhaust ventilation neessary if product is sprayed.

The threshold limit values noted in section 8 must be monitored.In all areas w here isocyanate aerosols and/or vapor concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a w ay that the marketplace exposure limits (WEL) is not exceeded. The air should be draw n aw ay from the personnel handling the product.

The personal protective measures described in section 8 must be observed.The precautions required in the handling of isocyanates must be taken.Avoid contact w ith skin and eyes and the inhalation of vapor.

Keep aw ay from foodstuffs,drinks and tobacco.Wash hands before breaks and at end of w ork and use skin-protecting ointment.Keep w orking clothes separately.Take off all contaminated clothing immediately.

6.2 Conditions for safe storage,including any incompatibilities

Keep container dry and tightly closed in a coll and w ell ventilated place.Further information on the storage conditions w hich must be observed to preserve quality can be found in our product information sheet.

storage class (TRGS 510) : 10:Combustible liqiuds

6.3 Specific end use (s)
No information available.

SECTION 7:Exposure controls /personal protetion

7.1 Control paraments

componenst wotih workplace control paraments

Substance	CAS-No	Basic	Type	Value	Ceiling Limit Value	Remarks
Hexamethylene -1,6-diis ocyanate	822-06-0	TRGS 900				listed
Hexamethylene -1,6-diis ocyanate	822-06-0	TRGS 900		0,005 PPM0,035MG/M3	=2=	
Hexamethylene -1,6-diis ocyanate	822-06-0	TRGS 900	STEL CL			Category 1: substances for w hich the localized effect has an assigned OEL or for substances w ith a sensitizing effect in respiratory passages
Hexamethylene -1,6-diis ocyanate	822-06-0	TRGS 900	STEL FAC			substance listed w ith both Peak factor and STEL factor . The Peak factor is supplied w ith the AGW values

Exposition assessment value (EBW) per TGRS 430 :Polyisocyanate content (HDI oligomers and/or prepolymers)98%.Use an exposition assessment value of 0,5ng/m3.

7.2 Exposure controls

Respiratory protection

Respiratory protection required in insuffiiently ventilated w orking areas and during spraying.An air-fed mask,or for short periods of w ork , a combination of charcal filter and particulate filter is recommended

In case of hypersensitivity of the respiratory tract and skin (e.g asthmatics and those w ho suffer from chronic bronchitis and chronic skin complaints) it is inadvisable to w ork w ith the product

Hand protetion
Suitable materials for safety gloves EN374:
Butyl rubber-IIR:thickness >=0,5mm;breakthrough time>=480min
Fluorinated rubber-FKM(>=0,4mm)

Recommendation:contaminated gloves should be disposed of

Eye protection
Wear eye/face protection

Skin and body protection
Wear suitable protetive clothing

SECTION 8:Physical and chemical properties

8.1 Information on basic physical and chemical properties

Appearance:	liquid	
Colour:	colourless to yellow ish	
Odour:	almost odourless	
Odour Threshold:	not established	
pH	not applicable	
Pour point:	ca.-27 °C	
Boiling point/boiling range:	>300 °C at 1.013hPa	DIN 53171
Flash point:	ca. 192 °C at 1.013hPa	DIN EN ISO 2719

Evaporation rate:	not established	
Flammability(solid,gas):	not applicable	
Burning number:	not applicable	
Vapour pressure:	ca.17 hPa at 20 °C	EG A4
	ca.26 hPa at 50 °C	EG A4
	ca.28 hPa at 55 °C	EG A4
Vapour pressure of ingredients:		
Hexamethylene-1-6-diisocyanate	ca 0,007 hPa at 20 °C	
Hexamethylene-1-6-diisocyanate homopolymer	<0,0001 hPa at 20 °C(vapor pressure balance /OED	
Hexamethylene-1-6-diisocyanate homopolymer	<0,0001 hPa at 20 °C(vapor pressure balance /OED	
	Not established	
Vapour density:		
Density:	ca.1,16 g/cm³ at 20°c	DIN 51757
Miscibility with water:	immiscible at 15°C	
surface:	not established	
Partition coefficient (n-octanol/water);	not established	
Auto -ignition temperature	not applicable	DIN 51794
ignition temperature	ca.425 °c	
Decomposition temperature:	not established	
Viscosity ,dynamic	ca.3.500 mPa at 23°c	DIN 53019
Explosive properties	not established	
Dust explosion class	not applicable	
Oxidising properties	not established	

The indicated values do not necessarily correspond to the product specification.Please refer to the technical information sheet for specification data.

SECTION 9:Stability and reactivity

9.1 Reactivity
This information is not available.

9.2 Possibility stability
This information is not available.

9.3 Possibility of hazardous reactions
Exothermi reaction w ith amines and alcohols; reacts slow y w ith w ater forming CO2,in closed containers risk of bursting ow ing to increase of pressure.

9.4 Conditions to avoid
This information is not available.

9.5 Incompatible material
This information is not available.

9.6 Hazardous decomposition products
On drying of thr coating/hardening of neutralising agent (see section 3)

SECTION 10:Toxicological information

Toxicological studies on the product are not yet available.

Please find below the data avaiable to us:

10.1 Information on toxicological effects

Acute toxicity,oral
Hydrophilic aliphatic polyisocyanate based on HDI
LD50 rat >=5.000 mg/kg
Method: OECD Test Guideline 423
Toxicological studies of a comparable product.

Acute toxicity,dermal
No data available.

Acute toxicity,inhalation
Hydrophilic aliphatic polyisocyanate based on HDI
LD50 rat,female :0,390mg/1 4h
Test atmosphere :dust /mist
Method: OECD Test Guideline 403
studies of a comparable product

The test atmosphere generated in the animal study is not representative of w orkplace environments, how the substance is placed on the market ,and how it can reasonably be expected to be used.Therefore the test result cannot be directly applied for the purpose of assessing hazard.Based on expert judgment and the w eight of the evidence, a modified classification for acute inhalation toxicity is justified.

Converted acute toxicity point estimate 1,5mg/l
Test atmosphere:dust/mist
Method:Expert judgement

Assessment:Harmful if inhaled.

Primary skin irritation
Hydrophilic aliphatic polyisocyanate based on HDI
Species: rabbit
Result: An irritant effect cannot be distinguished from a mechanical load aused by the removal of the test specimen.
Classification:No skin irritation
Method:OECD Test Guideline 404
Toxicological studies of a comparable product

Primary mucosae irritation
Hydrophilic aliphatic polyisocyanate based on HDI
species:rabbit
Result:slight irritant
Classification:No eye irritation
Method:OECD Test Guideline 405
Toxicological studies of a comparable product.

Sensitisation
Hydrophilic aliphatic polyisocyanate based on HDI
Skin sensitization (local lymph node assay(LLNA));
Species:Mouse
Result:positive
Classification:May cause sensitization by skin contact(sub cat.1B)
Method:OECD Test Guideline 429
Toxicological studies of a comparable product.

Respiratory sensitization

Classification:No classification according to EC Directives 2006/121/EC or 1999/45/EC as respiratory sensitizer.
No pulmonary sensitisation observe in animal tests

No pulmonary sensitisation potential w as observed in guinea pigs after either intradermal or inhalative induction w ith polyisocyanate based on hexamethylene diisocyanate.

Subacute,subchronic and prolonged toxicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity/Fertility
No data available.

Genotoxicity in vitro
Hydrophilic aliphatic polyisocyanate based on HDI
Test type: Salmonella /microsome test (Ames test)
Result :No indication of mutagenic effects
Method:OECD Test Guideline 471
Toxicological studies of a comparatable product

Genotoxocity in vivo
No data available.

STOT evaluetion-one-time exposure
Hydrophilic aliphatic polysocyanate based on HDI
May cause respiratory irritation
Studies of a comparable product

STOT evaluation-repeated exposure
No data available.

Aspiration toxicity
No data available.

Additional information
Special properties/effects:Over-exposure entails the risk of concentration-dependent irrutating effects on eyes,nose throat,and respiratory tract.Delayed appearancce of the complaints and development of hypersensiticity (difficult breathing,coughing, asthma) are possible.Hypersensitive persons may suffer from exposure limit.Prolonged contact with the skin may cause tanning and irritant effects.

Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.

SECTION 11:Ecological information

Ecotoxicological studies of the product are not available

Do not allow to escape into waterways,wastewater or soil.

Please find below the data available to us:

11.1 Toxicity

Acute Fish toxicity
Hydrophilic aliphatic polyisocyanate based on HDI
LC50 35,2mg/l
Species:Danio rerio(zebra fish)
Exposure duration: 96h
Method:OECD Test Guideline 203
Excotoxicological reports on a comparable product

Acute toxicity for dapnia
Hydrophilic aliphatic polyisocyanate based on HDI
LC50 > 100mg/l
Species:Daphnia magna (Water flea)
Exposure duration: 48h
Method:OECD Test Guideline 202
Excotoxicological reports on a comparable product

Acute toxicity for algae
Hydrophilic aliphatic polyisocyanate based on HDI
ErC50 72mg/l
Species:Desmodesmus subspicatus(Green algae)
Exposure duration: 72h
Method:OECD Test Guideline 201
Excotoxicological reports on a comparable product

Acute bacterial toxicity
Hydrophilic aliphatic polyisocyanate based on HDI
EC50 10.000mg/l
Species:Activated sludge
Exposure duration: 72h
Method:OECD Test Guideline 201
Excotoxicological reports on a comparable product

11.2 Persistence and degradability

Biodegradability
Hydrophilic aliphatic polyisocyanate based on HDI
Biodegradation:0% 28 d, i.e not readil l
Method:OECD Test Guideline 301 F
Ecotoxicological reports on a comparable product

11.3 Bioaccumulative potential
No data available

11.4 Mobility in soil
No data available

11.5 Results of PBT and vPvB assessment
This substance does not meet the criteria for classification as PBT or vPvB

11.6 Other adverse effects
Isocyanate reacts with water at the interface forming CO2 and a solid insoluble product with high melting point (polyurea).This reaction is accelerate by surfactants (e.g detergents) or by watersoluble solvents.Previous experience shows that polyurea is inert and non-degradable.

SECTION 12:Disposal consideration

Dispose in accordance with applicable international, national and local laws, ordinances and statutes.For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWS) should be used.

12.1 Waste Treatment methods
After final product withdrawal,all residues must be removed from containers (drip-free,powder-free or paste-free)
Once the product residues adhering to the walls of the containers have been rendered harmless,the product and hazard labels must be invalidated.These containers can be returned for recycling to the appropriate centres set up within the framework of the existing take-back scheme of the chemical industy.Containers must be recycled in compliance with national legislation and environmental regulations

None disposal into waste water.

SECTION 13:Transport information

AD+A383:C419R/RID

13.1 UN number	:	Not dangerous goods
13.2 UN propers shipping name	:	Not dangerous goods
13.3 Transport hazard class (es)	:	Not dangerous goods
13.4 Packing group	:	Not dangerous goods
13.5 Environmental hazards	:	Not dangerous goods

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13.5 Environmental hazards	:	Not dangerous goods

IATA

13.1 UN number	:	Not dangerous goods
13.2 UN propers shipping name	:	Not dangerous goods
13.3 Transport hazard class (es)	:	Not dangerous goods
13.4 Packing group	:	Not dangerous goods
13.5 Environmental hazards	:	Not dangerous goods

IMDG

13.1 UN number	:	Not dangerous goods

13.2 UN propers shipping name	:	Not dangerous goods
13.3 Transport hazard class (es)	:	Not dangerous goods
13.4 Packing group	:	Not dangerous goods
13.5 Environmental hazards	:	Not dangerous goods

13.6 Special precautions for user
See section 6-8

Additional information	:	Not dangerous cargo Keep dry

13.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable