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

1.1. Product identifier

KÖSTER IN 5 B

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

Use of the substance/mixture

for professional use only Building and construction work.

Uses advised against

No identified use(s).

1.3. Details of the supplier of the safety data sheet

Company name:	KÖSTER BAUCHEMIE AG	
Street:	Dieselstrasse 1 - 10	
Place:	D-26607 Aurich	
Telephone:	+49-4941-9709-0	Telefax: +49-4941-9709-40
e-mail:	info@koester.eu	
Contact person:	Forschung & Entwicklung	
e-mail:	produktsicherheit@koester.eu	
Internet:	www.koester.eu	

1.4. Emergency telephone number:

+49-551-19240 (24 h, Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

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
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Methylenediphenyl diisocyanate, isomers and homologues

Signal word: Danger

Pictograms:

Hazard 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 difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	Wear respiratory protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321	Specific treatment (see SECTION 4: First aid measures on this label).
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Special labelling of certain mixtures

EUH204	Contains isocyanates. May produce an allergic reaction.

Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

2.3. Other hazards

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Isocyanate containing product.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
9016-87-9	Methylenediphenyl diisocyanate, isomers and homologues			60 - < 80 %
	-	615-005-01-6		
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			
108-32-7	propylene carbonate			20 - < 40 %
	203-572-1	607-194-00-1		
	Eye Irrit. 2; H319			
25791-96-2	Glycerol propoxylate polymer			2 - < 5 %
	Acute Tox. 4; H302			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
9016-87-9	-	Methylenediphenyl diisocyanate, isomers and homologues	60 - < 80 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = 490 mg/l (dusts or mists); dermal: LD50 = > 9000 mg/kg; oral: LD50 = > 10000 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100 Resp. Sens. 1; H334: >= 0,1 - 100 STOT SE 3; H335: >= 5 - 100		
108-32-7	203-572-1	propylene carbonate	20 - < 40 %
	dermal: LD50 = > 23800 mg/kg; oral: LD50 = 34600 mg/kg		
25791-96-2		Glycerol propoxylate polymer	2 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1000 mg/kg		

Further Information

Contains isocyanates. See information supplied by the manufacturer.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Move victim out of danger zone. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. IF exposed: SECTION 6: Accidental release measures

After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. Medical treatment necessary.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Medical treatment necessary.

After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
Caution if victim vomits: Risk of aspiration!

4.2. Most important symptoms and effects, both acute and delayed

Sensitisation to the respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Symptoms can occur only after several hours. Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.

4.3. Indication of any immediate medical attention and special treatment needed

May cause sensitisation especially in sensitive humans. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance itself, combustion products, resulting gases: Isocyanates. Hydrocyanic acid (hydrocyanic acid).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

Due to gaseous decomposition products, overpressure can occur in tightly sealed containers.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place.

Hints on joint storage

Do not store together with: Acid, alkali

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.

7.3. Specific end use(s)

Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

Preventive industrial medical examinations are to be offered.

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Hand protection

Tested protective gloves are to be worn: Suitable material: NBR (Nitrile rubber). Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: insufficient ventilation. gas filtering equipment (EN 141).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	brown	
Odour:	characteristic	
Melting point/freezing point:		< 0 °C
Flash point:		> 100 °C
Water solubility:		not miscible
Vapour pressure:		0,0001 hPa
Density:		1,2 g/cm³

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not explosive.

Oxidizing properties

Not oxidizing.

Other safety characteristics

Viscosity / dynamic: (at 23 °C)	300 mPa·s

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : Water. Formation of: Carbon dioxide.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures. SECTION 7: Handling and storage.

10.3. Possibility of hazardous reactions

Exothermic reactions with: Alcohols. amines. hazardous polymerization.

10.4. Conditions to avoid

Protect from sunlight. Store in a well-ventilated place.

10.5. Incompatible materials

water, Amines, Etchant and acids, Metal.

10.6. Hazardous decomposition products

Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

Acute toxicity, inhalant.

ATEmix calculated

ATE (inhalation vapour) 14,67 mg/l; ATE (inhalation dust/mist) 2,000 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
9016-87-9	Methylenediphenyl diisocyanate, isomers and homologues					
	oral	LD50 mg/kg	> 10000	Rat		
	dermal	LD50 mg/kg	> 9000	Rat		
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) dust/mist	LC50	490 mg/l	Rat		
108-32-7	propylene carbonate					
	oral	LD50 mg/kg	34600	Rat	GESTIS	
	dermal	LD50 mg/kg	> 23800	Rabbit	GESTIS	
25791-96-2	Glycerol propoxylate polymer					
	oral	LD50 mg/kg	1000	Rat		
	dermal	LD50 mg/kg	> 2000	Rat		

Information on likely routes of exposure

ingestion.

Specific effects in experiment on an animal

No information available.

Additional information on tests

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

SECTION 12: Ecological information

12.1. Toxicity

No harm to water organisms up to the tested concentration.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
9016-87-9	Methylenediphenyl diisocyanate, isomers and homologues						
	Acute fish toxicity	LC50	> 1000 mg/l	96 h	Danio rerio (zebrafish)		
	Acute crustacea toxicity	EC50	> 1000 mg/l	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(EC50	> 100 mg/l)	3 h	Respiratory inhibition of municipal activated sludge.		
25791-96-2	Glycerol propoxylate polymer						
	Crustacea toxicity	NOEC	10 mg/l	21 d	Daphnia magna		

12.2. Persistence and degradability

Hydrolysis to bindings insoluble in water. Product is not easily biodegradable.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential. Does not accumulate in organisms.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-32-7	propylene carbonate	-0,41

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No risks worthy of mention.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

080501 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes not otherwise specified in 08; waste isocyanates; hazardous waste

List of Wastes Code - used product

080501 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes not otherwise specified in 08; waste isocyanates; hazardous waste

Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

Other applicable information (marine transport)

No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

Other applicable information (air transport)

No dangerous good in sense of these transport regulations.

14.6. Special precautions for user

SECTION 6: Accidental release measures

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2004/42/EC (VOC): 18 % (198 g/l)

National regulatory information

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

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 4; H332	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Resp. Sens. 1; H334	Calculation method
Skin Sens. 1; H317	Calculation method
Carc. 2; H351	Calculation method
STOT SE 3; H335	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
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.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)