

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**KÖSTER 2 IN 1 B**

Revision date: 22.05.2018

Product code: IN201b

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

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**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:	KOESTER BAUCHEMIE AG	
Street:	Dieselstrasse 1 - 10	
Place:	D-26607 Aurich	
Telephone:	+49-4941-9709-0	Telefax: +49-4941-9709-40
e-mail (Contact person):	produktsicherheit@koester.eu	
Internet:	www.koester.eu	
Responsible Department:	Forschung & Entwicklung	

**1.4. Emergency telephone number:** +49-551-19240 (24 h, Giftinformationszentrum Nord)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

Methylenediphenyl diisocyanate, isomers and homologues

**Signal word:** Danger

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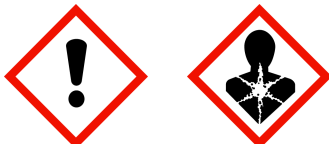
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## Pictograms:



## 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.
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.

## Additional advice on labelling

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

**2.3. Other hazards**

Contains isocyanates. May produce an allergic reaction.

**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 according to Regulation (EC) No. 1272/2008 [CLP]			
101-68-8	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate			< 50 %
	202-966-0	615-005-00-9		
	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			
9016-87-9	Methylenediphenyl diisocyanate, isomers and homologues			< 50 %
	618-498-9			
	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			< 30 %
	203-572-1	607-194-00-1		
	Eye Irrit. 2; H319			
25791-96-2	Glycerol propoxylate polymer			< 5 %
	Acute Tox. 4; H302			

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

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**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

**After inhalation**

Provide fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. Where appropriate artificial ventilation. 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. Remove contact lenses, if present and easy to do. Continue rinsing.

**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**

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Subsequent observance for pneumonia and lung oedema.

**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. Suitable extinguishing media: Dry extinguishing powder. Foam.

**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: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide Nitrogen oxides (NO<sub>x</sub>). Isocyanates. Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. Danger of bursting container.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit. The danger areas must be delimited and identified using relevant warning and safety signs.

**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**

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. Do not allow to enter into soil/subsoil.

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#### **6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. 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.

##### **Further information on handling**

Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. When using do not eat or drink.

#### **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.

##### **Advice on storage compatibility**

Do not store together with: Acid, alkali

##### **Further information on storage conditions**

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

#### **7.3. Specific end use(s)**

Further information: see technical data sheet.

### SECTION 8: Exposure controls/personal protection

#### **8.1. Control parameters**

##### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Isocyanates, all (as -NCO) Except methyl isocyanate	-	0.02		TWA (8 h)	WEL
		-	0.07		STEL (15 min)	WEL

##### **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.

##### **Protective and hygiene measures**

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.

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**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

**Changes in the physical state**

Melting point:	< 0 °C
Flash point:	> 100 °C

**Explosive properties**

not explosive.

**Oxidizing properties**

Not oxidizing.

Vapour pressure:	0,0001 hPa
Density:	1,1 g/cm <sup>3</sup>
Water solubility:	not miscible
Viscosity / dynamic: (at 23 °C)	300 mPa·s

**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**Reacts vigorously with water, including moisture in the air. Formation of: Carbon dioxide.  
Reacts with : Alcohols. amines.**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. Heat: Thermal decomposition. Due to gaseous decomposition products, overpressure can occur in tightly sealed containers.

**10.4. Conditions to avoid**

Protect from sunlight. Store in a well-ventilated place. Do not mix with alkali. Do not mix with: water.

**10.5. Incompatible materials**

water, Amines, Etchant and acids, Metal.

**10.6. Hazardous decomposition products**

Carbon dioxide.

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## SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

## Toxicokinetics, metabolism and distribution

No information available.

## Acute toxicity

Acute toxicity, inhalant.

## ATEmix calculated

ATE (inhalative vapour) 18,33 mg/l; ATE (inhalative aerosol) 2,500 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
101-68-8	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate					
	oral	LD50 mg/kg	9200	Rat	GESTIS	
	inhalative vapour	ATE	11 mg/l			
	inhalative aerosol	ATE	1,5 mg/l			
9016-87-9	Methylenediphenyl diisocyanate, isomers and homologues					
	oral	LD50 mg/kg	> 10000	Rat		
	dermal	LD50 mg/kg	> 9400	Rabbit		
	inhalative vapour	ATE	11 mg/l			
	inhalative aerosol	ATE	1,5 mg/l			
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		

## 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
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.

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**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 components in this formulation do not meet the criteria for classification as PBT or vPvB.

**12.6. Other adverse effects**

No risks worthy of mention.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

**Waste disposal number of waste from 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

**Waste disposal number of 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.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

SECTION 6: Accidental release measures

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

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

not applicable

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**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 56: 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

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

**National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

**Additional information**

1-4

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****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.

**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.)*