

**Safety Data Sheet**

according to UK REACH Regulation

EGOFLEX 471 Komp. B

Revision date: 13.01.2022

Product code: 347172501B

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

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Product group: polyurethane

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

Adhesive

1.3. Details of the supplier of the safety data sheet

Company name:	EGO Dichtstoffwerke GmbH & Co. Betriebs KG	
Street:	Kaltenbrunn 27	
Place:	D-82467 Garmisch-Partenkirchen	
Telephone:	+49 (0)8821 956 90	Telefax: +49 (0)8821 956 990
e-mail:	info@ego.de	
Contact person:	Laboratory	Telephone: +49 (0)8821 956 960
e-mail:	EGO-Labor@ego.de	
Internet:	www.ego.de	

1.4. Emergency telephone

+49 55119240 (24h/7d)

number:GIZ-Nord, Göttingen
Member of EPECs network**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

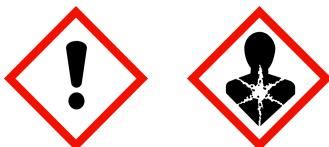
Skin Irrit. 2; H315
Eye Irrit. 2; H319
Resp. Sens. 1; H334
Skin Sens. 1; H317
Carc. 2; H351
STOT SE 3; H335
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

Contains isocyanates. See information supplied by the manufacturer.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate
Methylenediphenyldiisocyanate modified

Signal word: Danger**Pictograms:****Hazard statements**

H315	Causes skin irritation.
H319	Causes serious eye irritation.

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H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

Precautionary statements

P201	Obtain special instructions before use.
P260	Do not breathe Vapor / spray.
P280	Wear protective gloves / protective clothing / eye protection.
P284	Wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water / soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Special labelling of certain mixtures

EUH204	Contains isocyanates. May produce an allergic reaction. Restricted to professional users. As from 24 August 2023 adequate training is required before industrial or professional use.
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2.3. Other hazards

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Mixture of substances listed below with nonhazardous additions.

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate			< 25%
	905-806-4		01-2119457015-45	
	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			
25686-28-6	Methylenediphenyldiisocyanate modified			< 25%
	500-040-3		01-2119457013-49	
	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			
101-68-8	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate			< 15%
	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			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
	905-806-4	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	< 25% %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists)	
25686-28-6	500-040-3	Methylenediphenyldiisocyanate modified	< 25% %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >9400 mg/kg; oral: LD50 = >5000 mg/kg	
101-68-8	202-966-0	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	< 15% %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: LD50 = 9200 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	

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

First aider needs to protect himself. Never give anything by mouth to an unconscious person. Handle in accordance with good industrial hygiene and safety practice. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

After inhalation

Move out of dangerous area. Move to fresh air. If unconscious place in recovery position and seek medical advice. If not breathing, give artificial respiration. If symptoms persist, call a physician.

After contact with skin

Remove mechanically (e.g. dab away using wadding or cellulose material) then thoroughly wash the affected skin with a mild cleanser and water. Take off all contaminated clothing immediately. If skin irritation persists, call a physician. dab with Polyethylene glycol 400.

After contact with eyes

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

After ingestion

Rinse mouth thoroughly with water. If conscious, give the victim plenty of water to drink. Do NOT induce vomiting. Call a physician immediately.

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

The following symptoms can occur:

Dermatitis

Prolonged or repeated contact may dry skin and cause irritation.

May cause eye, skin, and respiratory tract irritation.

headache

Cough

Repeated or prolonged contact causes sensitisation, asthma and eczemas.

Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

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Suitable extinguishing media

Water spray, Dry powder, Foam, Carbon dioxide (CO₂).
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

High volume water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon dioxide (CO₂), nitrogen oxides (NO_x), Hydrogen cyanide (hydrocyanic acid), Isocyanates, Toxic gases / vapors, Carbon monoxide.
Danger of bursting on heating.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
In the event of fire, wear self-contained breathing apparatus. Wear a chemical resistant suit.
Cool endangered containers with water spray.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Ensure adequate ventilation. Protective suit.
Avoid contact with skin, eyes and clothing. Avoid breathing vapours, mist or gas.
Special skid risk by leaking/spilling product.

6.2. Environmental precautions

If possible, contain escaped material. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up**Other information**

Use mechanical handling equipment. Soak up with inert absorbent material and dispose of as hazardous waste. Leave in unclosed containers for a few days until no reaction occurs. Keep moist. Do not close containers. CO₂ formation in closed containers creates pressure.

6.4. Reference to other sections

See also section 7, 8, 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Do not breath vapour. Provide sufficient air exchange and/or exhaust in work rooms.
Avoid contact with skin, eyes and clothing.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feeding stuffs.
Handle in accordance with good industrial hygiene and safety practice.

Advice on protection against fire and explosion

None under normal processing.
Normal measures for preventive fire protection.

Advice on general occupational hygiene

Provide for sufficient ventilation and punctiform suction at critical points. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Take off immediately all contaminated clothing

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from direct sunlight. Avoid temperatures above 50 °C.
Recommended storage temperature: 15 °C - 25 °C

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Adhesives

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

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

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
25686-28-6	Methylendiphenyldiisocyanate modified			
Consumer DNEL, acute		inhalation	systemic	0,05 mg/m ³
Worker DNEL, acute		inhalation	systemic	0,1 mg/m ³
Worker DNEL, acute		inhalation	local	0,1 mg/m ³
Consumer DNEL, acute		dermal	systemic	25 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	20 mg/kg bw/day
Worker DNEL, acute		dermal	local	28,7 mg/cm ²
Worker DNEL, long-term		inhalation	systemic	0,05 mg/m ³
Worker DNEL, long-term		inhalation	local	0,05 mg/m ³
Consumer DNEL, acute		inhalation	local	0,05 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	0,025 mg/m ³
Consumer DNEL, acute		dermal	local	17,2 mg/cm ²
Consumer DNEL, long-term		inhalation	local	0,025 mg/m ³

PNEC values

CAS No	Substance	Value
25686-28-6	Methylendiphenyldiisocyanate modified	

8.2. Exposure controls

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Individual protection measures, such as personal protective equipment**Eye/face protection**

Safety glasses

Hand protection

Protective nitrile gloves

Glove thickness (\Rightarrow 0,35mm) Break through time \Rightarrow 480 minutes

The obtained break through times according to EN 374 Part III are not measured under normal operating conditions. Therefore a maximum usage time of 50% of the break through time is recommended.

Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Request information on glove permeation properties from the glove supplier.

Skin protection

Long sleeved clothing

Respiratory protection

No personal respiratory protective equipment normally required.

Ensure adequate ventilation, especially in confined areas.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

In case of insufficient ventilation wear suitable respiratory equipment. respirator with A2 P2 filter

Environmental exposure controls

Should not be released into the environment.

Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Paste
Colour:	beige
Odour:	characteristic

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flash point:	not determined

Explosive properties

The product is: not Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
pH-Value:	not applicable
Viscosity / dynamic: (at 20 °C)	not determined
Water solubility:	insoluble
Vapour pressure:	not determined
Density (at 20 °C):	1,55 g/cm ³

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9.2. Other information**Other safety characteristics**

The product is: not auto-flammable

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reacts with water

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction possible with: alcohols, amines, bases, acids, water

10.4. Conditions to avoid

Exposure to moisture.

Polymerization by high heat possible.

Temperatures above 260 °C

10.5. Incompatible materials

Amines, Acids and bases, Alcohols, Water.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Harmful by inhalation.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate				
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
25686-28-6	Methylenediphenyldiisocyanate modified				
	oral	LD50 >5000 mg/kg	rat		
	dermal	LD50 >9400 mg/kg	rabbit		
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
101-68-8	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate				
	oral	LD50 9200 mg/kg	Rat	GESTIS	
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

Irritation and corrosivity

Irritating to eyes, respiratory system and skin.

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Sensitising effects

May cause sensitisation by inhalation. May cause sensitisation by skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction

Limited evidence of a carcinogenic effect.

STOT-single exposure

This information is not available.

STOT-repeated exposure

Danger of serious damage to health by prolonged exposure.

Aspiration hazard

No data is available on the product itself.

Specific effects in experiment on an animal

This information is not available.

Practical experience

This information is not available.

SECTION 12: Ecological information**12.1. Toxicity**

Do not flush into surface water or sanitary sewer system. Leakage of already small quantities into the soil hazardous to drinking water

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
25686-28-6	Methylendiphenyldiisocyanate modified					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Fish	OECD Test Guideline 203	
	Acute algae toxicity	ErC50 >1640 mg/l	72 h		OECD Test Guideline 201	
	Crustacea toxicity	NOEC >10 mg/l	21 d	Daphnia magna (Water flea)		
	Acute bacteria toxicity	(EC50 >100 mg/l)	3 h			

12.2. Persistence and degradability

According to experiences hitherto this product is inert and not degradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
25686-28-6	Methylendiphenyldiisocyanate modified			
		0 %	28	OECD Test Guideline 302
	Not biodegradable			

12.3. Bioaccumulative potential

This information is not available.

BCF

CAS No	Chemical name	BCF	Species	Source
25686-28-6	Methylendiphenyldiisocyanate modified	200		

12.4. Mobility in soil

No data is available on the product itself.

12.5. Results of PBT and vPvB assessment

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The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
not applicable

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

This information is not available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not put residues of product into household waste. It should be given in the original package to the official waste disposal authorities.

080501 - waste isocyanates

List of Wastes Code - residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine pollutant: no

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

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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 3, Entry 56

2004/42/EC (VOC): 6,1 g/l (0,39%)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,15.

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

Classification	Classification procedure
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)

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 (Respiratory system) through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

These data describe only the safety requirements for the product(s) and are based on our present knowledge. However, they do not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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