

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 17.03.2023

Version number 7.2 (replaces version 7.1)

Revision: 17.03.2023

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

- **1.1 Product identifier**
- **Trade name:** **EKO SW**
- **UFI:** 14P0-F0MP-J008-JR1C
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Application of the substance / the mixture** Adhesives
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
POLYCHEM SYSTEMS Sp. z o.o.
ul. Wołczyńska 43
60-003 Poznań, Polska
tel. (+48) 61 867 60 51
fax. (+48) 61 867 65 21
e-mail: info@polychem-systems.com.pl
- **Further information obtainable from:** POLYCHEM SYSTEMS Sp. z o. o.
- **1.4 Emergency telephone number:** (+48) (0) 61 867 60 51 (the line open from 7.00 a.m. to 3 p.m)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Carc. 2 H351 Suspected of causing cancer.
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



- Acute Tox. 4 H332 Harmful if inhaled.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
methylenediphenyl diisocyanate
diisocyanate 4,4'-methylenediphenyl, oligomers
- **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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 through prolonged or repeated exposure.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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- P302+P352 IF ON SKIN: Wash with plenty of water.
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.
P312 Call a POISON CENTER/doctor if you feel unwell.

Additional information:

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

People with respiratory allergy should avoid contact with the product. Symptoms of excessive exposure to the respiratory tract to the product may persist for several hours. Dust, fumes and aerosols form a fundamental threat to the respiratory tract.

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 26447-40-5 EINECS: 247-714-0 Index number: 615-005-00-9 Reg.nr.: 01-2119457015-45-0001	methylenediphenyl diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373 ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	25-50%
CAS: 25686-28-6 NLP: 500-040-3 Reg.nr.: 01-2119457013-49-0007	diisocyanate 4,4'-methylenediphenyl, oligomers ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373 ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≥2.5-<10%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of 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 and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulty

Coughing

Asthma attacks

Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

Every person taking part in fire-fighting must wear complete protective clothing: full face mask with breathing apparatus feeded from independent air source, safety helmet, a coverall, gloves and shoes made of PVC.

Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation

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- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Store away from oxidising agents.
Store away from water.
Store away from foodstuffs.
- **Further information about storage conditions:**
Store in dry conditions.
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
Use exhaust ventilation or other control system to keep vapour concentrations in air below threshold values required. MDI can not be sensed before professional exposure limit value is exceeded. For all employed, who handle or come in contact with respiratory tract allergens, medical supervision is recommended. Employees, who suffered asthmatic type disease, bronchi inflammation or skin allergy, should not work with applying of MDI based products.
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Protective equipment with a type "A" filter against organic vapours and, in the event of dust or aerosols, a minimum of type A/P2 filters may be used.
- **Hand protection**



Protective gloves

Protective gloves, resistant to chemicals (EN 374).
Discard contaminated gloves.

- **Material of gloves**
Suggested protective glove materials: butyl rubber (BR), nitrile rubber (NR), chloroprene rubber (Neoprene).
In case of prolonged or frequent contact, gloves with protection class 5 or higher are recommended (according to EN374, permeation time greater than 240 minutes). If only brief contact is expected, gloves with protection class 3 or higher (with a permeation time of more than 60 minutes, according to EN374) are recommended. The thickness of the glove itself is not a good indicator of whether a glove provides protection against a chemical, as the level of protection is highly dependent on the specific composition of the glove material. Depending on the model and type of material, the thickness of the glove should generally be more than 0.35 mm to provide

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sufficient protection against prolonged and repeated contact with the substance. As an exception to this general rule, multilayer laminated gloves can provide longer protection with a thickness of less than 0.35 mm. Other gloves with a thickness of less than 0.35 mm may provide sufficient protection if only brief contact is expected.

Penetration time of glove material

Examples:

- Polychloroprene (Neoprene): thickness ≥ 0.5 mm; throughput ≥ 480 min.
- Nitrile/butadiene rubber (NBR): thickness ≥ 0.35 mm; capacity ≥ 480 min.
- Butyl rubber (BR): thickness ≥ 0.5 mm; capacity ≥ 480 min.
- Fluorinated rubber (FKM): thickness ≥ 0.4 mm; capacity ≥ 480 min.

Eye/face protection


Tightly sealed goggles

Environmental exposure controls

There are not any obligations to make regular measurements of emission to environment. Basic rules of machinery and devices exploitation are to be observed.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information

Colour:	Yellowish
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic at 25 °C:	2.000-4.000 mPas
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1.05-1.07 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	
Solids content:	0.0 %
Change in condition	
Evaporation rate	Not determined.

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void

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· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
Avoid reaction with water (humidity) – gaseous carbon dioxide is produced. The product comes into exothermic reactions with materials containing active hydroxyl groups.
- **10.2 Chemical stability** The product is stable at room temperature.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts violently with water.
Exothermic reaction.
- **10.4 Conditions to avoid** Avoid heat sources (sunbeams, heaters and the like) influence.
- **10.5 Incompatible materials:** Strong oxidizing substances, water, alcohol, acids, bases.
- **10.6 Hazardous decomposition products:**
Hydrogen cyanide (prussic acid)
Hydrocarbons
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**
CAS: 26447-40-5 methylenediphenyl diisocyanate

Inhalative LC50/4 h 11 mg/l (ATE)

CAS: 25686-28-6 diisocyanate 4,4'-methylenediphenyl, oligomers

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
Inhalative	LC50/4 h	1.5 mg/l (ATE)

- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

CAS: 25686-28-6 diisocyanate 4,4'-methylenediphenyl, oligomers

EC50/24h (static)	>1,000 mg/l (daphnia) (OECD 202 Daphnia sp. Acute Immobilisation Test)
EC50/72h (static)	>1,640 mg/l (alga) (OECD 201 Growth Inhibition Test)
LC50/96h (static)	>1,000 mg/l (fish) (OECD 203 Acute Toxicity Test)
EC50/3h (static)	>100 mg/l (bacteria) (OECD 209 Respiration Inhibition Test)
NOEC/21 d (static)	>10 mg/l (daphnia) (OECD 211 Reproduction Test)

12.2 Persistence and degradability

 No further relevant information available.

12.3 Bioaccumulative potential

 No further relevant information available.

12.4 Mobility in soil

 No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT:

 Not applicable.

vPvB:

 Not applicable.

12.6 Endocrine disrupting properties

 For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation:

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

European waste catalogue

08 05 01*	waste isocyanates
15 01 10*	packaging containing residues of or contaminated by hazardous substances

Uncleaned packaging:

Recommendation:

 Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN, IMDG, IATA

 not regulated

14.2 UN proper shipping name

ADR/RID/ADN, IMDG, IATA

 not regulated

14.3 Transport hazard class(es)

ADR/RID/ADN, ADN, IMDG, IATA

Class

 not regulated

14.4 Packing group

ADR/RID/ADN, IMDG, IATA

 not regulated

14.5 Environmental hazards:

 Not applicable.

14.6 Special precautions for user

 Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

 Not applicable.

UN "Model Regulation":

 not regulated

SECTION 15: Regulatory information

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

1.Regulation (EC) No 1272/2008 Of The European Parliament And Of The Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

2.Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (UK REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 and Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEG, 93/105/EC and 2000/21/WE

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3. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (UK REACH)

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

- 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.

• **Contact:** Polychem Systems Sp. z o. o.

• **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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