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

1.1 Product identifier

Grafen Professional Pu Adhesive Foam

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

Relevant identified uses: Used for fixing foamed polystyrene boards EPS, XPS during insulation of external walls of buildings. Used for bonding polystyrene panels, wall panels and the installation of window sills.

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet:

Supplier:	Madejski Sp. J.
Street address:	ul. Makuszyńskiego 28
Country/Postcode:	Poland, 31-752 Kraków
Telephone number:	+48 (12) 643 67 67

e-mail:	info@madejski.com.pl
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1.4 Emergency telephone number:	112
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Mixture:

Classification according to Regulation (EC) No 1272/2008 (CLP)

Aerosol 1 H222 Extremely flammable aerosol – category 1

H229 Pressurised container: May burst if heated.

Skin Irrit.2 H315 Causes skin irritation– category 2

Skin Sens.1 H317 May cause an allergic skin reaction – category 1

Eye Irrit.2 H319 Causes serious eye irritation – category 2

Acute Tox.4 H332 Harmful if inhaled – category 4

Resp. Sens.1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled – category 1

STOT SE.3 H335 May cause respiratory irritation – category 3

Carc.2 H351 Suspected of causing cancer – category 2

Lact. H362 May cause harm to breast-fed children

STOT RE.2 H373 May cause damage to organs through prolonged or repeated exposure – category 2

Aquatic Chronic3 H412 Harmful to aquatic life with long lasting effects – category 3

2.2 Label elements

Contains Polymethylene polyphenyl isocyanate, Chloroalkanes C14-17.


Supplemental information on the label:

EUH204 Contains isocyanates. May produce an allergic reaction

Hazard pictograms:



Signal word:
DANGER

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Hazard statements:

- H222** Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
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
H362 May cause harm to breast-fed children
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

- P102** Keep out of reach of children
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P263 Avoid contact during pregnancy/while nursing.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362 +364 Take off contaminated clothing and wash it before reuse.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container to in accordance with local/ regional/national/international regulation.

2.3 Other hazards


This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures:

Name	Identifiers	[% weight]	Classification according to Regulation (EC) No 1278/2008 (CLP).
Polymethylene polyphenyl isocyanate	Index No: - EC No: - CAS No: 9016-87-9 REACH Registration No.: -*	<50	Skin Irrit.2 H315 Skin Sens.1 H317 Eye Irrit.2 H319 Acute Tox.4 H332 Resp. Sens.1 H334 STOT SE.3 H335 Carc.2 H351 STOT RE.2 H373
Dimethyl Ether	Index No: 603-019-00-8 EC No: 204-065-8 CAS No: 115-10-6 REACH Registration No.: -*	<15	Flam. Gas1 H220 Press. Gas

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Tris(2-chlorisopropyl)-phosphate	Index No.: --- EC No: 237-158-7 CAS No: 13674-84-5 REACH Registration No: -*	<10	Acute Tox.4 H302
Chloroalkanes C14-17	Index No.: 602-095-00-X EC No: 287-477-0 CAS No: 85535-85-9 REACH pre-Registration No:*	<2,5	Lact. H362 Aquatic Acute1 H400 Aquatic Chronic1 H410 (M=1) EUH066

*A registration number is not available for this substance as the substance is exempted from registration or the annual tonnage does not require a registration.

The Full Text for all H-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Following eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. If eye irritation persists get medical attention.

Following inhalation: Move the exposed person to fresh air at once. Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues.

Following skin contact: Immediately remove contaminated clothing. Wash the skin with soap and water. Contaminated clothing should be washed before re-use. Get medical attention promptly if symptoms occur after washing.

Following ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor if you feel unwell. Provide ventilation.

4.2 Most important symptoms and effects, both acute and delayed

May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause eye and skin irritation.

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

If any symptoms persist seek medical advice and show the msds or label.

Notes for the doctor: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray

Unsuitable extinguishing media: do not use water in a jet


5.2 Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurised container: May burst if heated. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases.

5.3 Advice for firefighters

Special Fire Fighting Procedures: Wear full protective clothing and self-contained breathing apparatus.

Protective equipment for fire-fighters: Keep containers cool by spraying with water. If possible remove containers from the danger zone. Prevent from spreading or entering drains, ditches or rivers. Dispose of released and contained material in accordance with local regulations.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Removed from the danger area all persons not involved in the emergency. If necessary, order the evacuation. Avoid contact with skin, eyes. Avoid inhalation of vapours / aerosols. Provide ventilation.

For emergency responders:

Wear protective clothing as described in Section 8.

6.2 Environmental precautions

Do not discharge into drains, water courses or into the ground. Local authorities should be advised if any exposure to the environment occurs.

6.3 Methods and material for containment and cleaning up

Remove product by mechanical means. Take collected spill to manufacturer/ competent authority. Dispose of waste according to the applicable local and national regulation.

6.4 Reference to other sections

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:

Use only in a well-ventilated area. Avoid breathing vapor or aerosol. Avoid contact with eyes, skin. When handling, use appropriate personal protective equipment (see Section 8). Keep away from heat, sparks, flame and all other sources of ignition. Do not smoke! When using do not eat or drink.

Advice on general occupational hygiene:

Ensure good ventilation / exhaustion at the workplace. When using do not eat, drink or smoke. Wash hand before and after work with product. May cause sensitization by skin. Contaminated clothing should be washed before re-use. Avoid spillage.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place in temperature below 50°C. Keep away from heat, sparks, sunlight, open flame and smoking. Do not store together with oxidizing agents.

7.3 Specific end use(s)


Foam for foamed polystyrene boards EPS, XPS.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

International Limits Values:

Substance	CAS No:	Basis / Country	Short Time Value [mg/m ³]	Short Time Value [ppm-Calculated]	Time Weighted Average Exposure Limit [mg/m ³ -8 h]	Time Weighted Average Exposure Limit [ppm-Calculated]
Polymethylene polyphenyl isocyanate	9016-87-9	Germany European Union	0,05* -	- -	0,05* -	- -

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Dimethyl ether	115-10-6	Germany European Union	15200 -	8000 -	1900 1920	1000 1000
Chloroalkanes C14-17	85535-85-9	Germany European Union	48** -	2,4** -	6** -	0,3** -

*inhalable fraction

** inhalable aerosol

DNEL, PNEC – no data available

8.2 Exposure controls

Appropriate engineering controls

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear approved chemical safety goggles where eye exposure is reasonably probable.

Skin protection:

Hand protection: Wear protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Other: Wear protective clothing. Contaminated clothing should be washed before re-use.

Respiratory protection: Respiratory protection must be used if air contamination exceeds acceptable level. It is recommended to use respiratory equipment with filter ABEK.


Environmental exposure controls

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Do not discharge into drains, water courses or into the ground. Local authorities should be advised if any exposure to the environment occurs.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Light pink aerosol (Liquid under pressure)
Odour	Characteristic
Odour threshold	No data available
pH	No data available
Melting point / freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	21-25 kg/m ³
Solubility(ies)	No data available
Partition coefficient: n-octanol / water	No data available

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Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2 Other information:

No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

Not reactive under normal conditions of storage and use.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4 Conditions to avoid

Avoid release to the environment. Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data available for the mixture

Dimethyl Ether

LD50 (oral)	No data available
LC50 (rat, inhalation)	164000 ppm
LD50 (dermal)	No data available

Chloroalkanes C14-17

LD50 (rat, oral)	> 4000 mg/L
LC50 (rat, inhalation)	> 48170 mg/m ³
LD50 (rabbit, dermal)	> 13500 mg/kg b.w

Tris(2-chlorisopropyl)-phosphate

LD50 (rat, oral)	1011 mg/kg bw
LC50 (rat, inhalation)	> 4.6 mg/L air
LD50 (rabbit, dermal)	< 5000 mg/kg bw

Skin corrosion/irritation


The mixture was classified as an irritant to the skin.

Serious eye damage/irritation

The mixture was classified as an irritant to the eyes.

Respiratory or skin sensitisation

The mixture was classified as an may cause an allergic skin reaction. May cause allergy or asthma

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symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

The mixture was classified as an suspected of causing cancer

Reproductive toxicity

The mixture was classified as an may cause harm to breast-fed children

STOT-single exposure

The mixture was classified as an may cause respiratory irritation.

STOT-repeated exposure

The mixture was classified as an may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information

Contains isocyanates. May produce an allergic reaction.

SECTION 12: Ecological information

12.1 Toxicity

No data available for the mixture

Dimethyl Ether

Fish (Poecilia reticulata)	LC50	> 4.1 g/L	exposition time: 96h
Aquatic invertebrates (Daphnia magna)	EC50	> 4.4 g/L	exposition time:48h
Algae and bacteria (green algae)	EC50	154.917 mg/L	exposition time: 96h

Chloroalkanes C14-17

Fish (Alburnus alburnus)	LC50	> 5000mg/L	exposition time: 96h
Aquatic invertebrates (Daphnia magna)	EC50	0.006 mg/L	exposition time: 48h
Algae and bacteria (Pseudokirchnerella subcapitata)	EC50	> 3.2mg/L	exposition time: 72h

Tris(2-chlorisopropyl)-phosphate

Fish (Lepomis macrochirus)	LC	84 mg/L	exposition time: 96h
Aquatic invertebrates (Ceriodaphnia dubia)	LC50	0,071 mg/L	exposition time: 48h
Algae and bacteria (Pseudokirchnerella subcapitata)	EC50	82 mg/L	exposition time: 72h

12.2 Persistence and degradability

Dimethyl ether : Non degradable in the soil. Not readily biodegradable in water.

Chloroalkanes, C14-17: Not readily biodegradable in the soil. Not readily biodegradable in water.

12.3 Bioaccumulative potential

Dimethyl ether: Log Pow 0.1 ; Low potential for bioaccumulation (Log Kow < 4).

Chloroalkanes C14-17: Log Pow 5.47 - 8.01 ; High potential for bioaccumulation (BCF > 5000).

12.4 Mobility in soil

Chloroalkanes C14-17: Log Koc 5; Low potential for mobility in soil.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects


No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Proposed waste code

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08 05 01 waste isocyanates

16 05 04 gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport Information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1. UN number	1950	1950	1950	1950
14.2. UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable
14.3. Transport hazard class(es)	2.1.	2.1.	2.1.	2.1.
14.4. Packing group	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards	No	No	No	No
14.6. Special precautions for user	Tunnel restriction code: D	Not applicable	Number EmS: F-D, S-U	Not applicable
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 15: Regulatory information

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

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH),

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 with amendments.

2014/955/EU: Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council Text with EEA relevance

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Classification according to Regulation (EC) No. 1272/2008

Classification procedure: calculation method

Aerosol 1 H222, H229

Skin Irrit.2 H315

Skin Sens.1 H317

Eye Irrit.2 H319

Acute Tox.4 H332

Resp. Sens.1 H334


STOT SE.3 H335

Carc.2 H351

Lact. H362

STOT RE.2 H373

Aquatic Chronic3 H412

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Relevant H-statements (number and full text)

H220 Extremely flammable gas.
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
H362 May cause harm to breast-fed children.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Additional Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, Information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces a formulation containing the product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from the Product Safety Data Sheet to their own Product Safety Data Sheet.

Update section:2,3,4,5,6,7,8,9,10,11,12,14,15,16.

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. As stated above, this Safety Data Sheet has been prepared in compliance with applicable European law. If you purchase this material outside Europe, where compliance laws may differ, you should receive from your local supplier a SDS applicable to the country in which the product is sold and intended to be used. Please note that the appearance and content of the SDS may vary –even for the same product between different countries, reflecting the different compliance requirements.