

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.02.2017

Revision: 28.02.2017

1.1 Product identifier

Trade name: MPU - P45/B2

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

No further relevant information available.

Application of the substance / the mixture Onecomponent polyurethane foam gun grade (B2)

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Mungo Befestigungstechnik AG
Bornfeldstrasse 2
CH-4603 Olten

Further information obtainable from:

Phone +41 62 206 75 75
Fax +41 62 206 75 85
mungo@mungo.swiss

1.4 Emergency telephone number: In case of emergency, consult physician

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:

diphenylmethanediisocyanate, isomeres and homologues

Hazard statements

H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
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H315	Causes skin irritation.
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H373 May cause damage to organs through prolonged or repeated exposure.

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.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P284 In case of inadequate ventilation wear respiratory protection (a protective mask with an appropriate gas filter - i.e. type A1 according to standard EN 14387).
 P280 Wear protective gloves/protective clothing/eye protection.
 P260 Do not breathe vapours/spray.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 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.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P501 Dispose of container to in accordance with local/regional/national/international regulation.

Additional information:

Contains isocyanates. May produce an allergic reaction.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

Dangerous components:

CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues ⚠ 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	40-50%
CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether ⚠ Flam. Gas 1, H220; Press. Gas C, H280	5-15%
CAS: 75-28-5 EINECS: 200-857-2	isobutane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	1-10%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate ⚠ Acute Tox. 4, H302	1-10%
CAS: 74-98-6 EINECS: 200-827-9	propane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	<5%

- 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:

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

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- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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:**
Foam
CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Keep away from ignition sources.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Do not flush with water or aqueous cleansing agents
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**
Ensure that suitable extractors are available on processing machines
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

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- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**
Do not store together with acids.
Do not store together with alkalis (caustic solutions).
Store away from oxidising agents.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Protect from humidity and water.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

115-10-6 dimethyl ether

WEL	Long-term value: 1920 mg/m ³ , 1000 ppm
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9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

WEL	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³
	Sen; as -NCO

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **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.
Do not inhale dust / smoke / mist.
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.
- **Protection of hands:**



Protective gloves

Protective gloves according to EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

Wear airtight protective goggles EN 166

- **Body protection:** Protective work clothing EN 13688

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Aerosol
Colour:	According to product specification
Odour:	Characteristic

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** Not applicable, as aerosol.

- **Ignition temperature:** 199 °C

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Heating may cause an explosion.

- **Explosion limits:**

Lower:	3.0 Vol %
Upper:	18.6 Vol %

- **Density:** Not determined.

- **Solubility in / Miscibility with water:**

Insoluble.

- **Solvent content:**

VOC (EC) 18.7 %

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

- **10.2 Chemical stability**

- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

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- **10.3 Possibility of hazardous reactions** Contact with water releases flammable gases.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Hydrogen cyanide (prussic acid)
Carbon monoxide
Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

- **Acute toxicity**
Harmful if inhaled.

· LD/LC50 values relevant for classification:

115-10-6 dimethyl ether

Inhalative	LC50/4 h	308 mg/l (rat)
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- **Primary irritant effect:**
- **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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **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.
- **12.6 Other adverse effects** No further relevant information available.

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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
16 05 04*	gases in pressure containers (including halons) containing dangerous substances
15 01 10*	packaging containing residues of or contaminated by dangerous substances

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA 1950

14.2 UN proper shipping name

ADR 1950 AEROSOLS
 IMDG AEROSOLS
 IATA AEROSOLS, flammable

14.3 Transport hazard class(es)

ADR
 Class 2 5F Gases.
 Label 2.1

IMDG, IATA

Class 2.1
 Label 2.1

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Gases.
 EMS Number: F-D,S-U

Transport/Additional information:

ADR

Limited quantities (LQ) 1l

UN "Model Regulation": UN1950, AEROSOLS, 2.1

SECTION 15: Regulatory information

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

No further relevant information available.

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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

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.
- 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.

Abbreviations and acronyms:

- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas C: Gases under pressure – Compressed gas
- 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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