

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

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

- **1.1 Product identifier**
- **Trade name:** *Mipa PU 912-25 2K-PU-Härter*
- **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** *Hardening agent/ Curing agent*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MIPA SE  
Am Oberen Moos 1  
D-84051 Essenbach  
Tel.: +49 8703 92 20  
Fax.: +49 8703 92 21 00  
e-mail: [sdb-registratur@mipa-paints.com](mailto:sdb-registratur@mipa-paints.com)  
[www.mipa-paints.com](http://www.mipa-paints.com)
- **1.4 Emergency telephone number:** *International emergency number: +49(0)700 24112112 (MIP)*

**SECTION 2: Hazards identification**

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



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **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**



GHS02 GHS07

- **Signal word** *Warning*
- **Hazard-determining components of labelling:**  
*Hexamethylene diisocyanate, oligomers  
n-Butyl acetate  
2-Methoxy-1-methylethyl acetate  
Xylene*
- **Hazard statements**  
*H226 Flammable liquid and vapour.  
H317 May cause an allergic skin reaction.  
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.*
- **Precautionary statements**  
*P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

(Contd. on page 2)

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 1)

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.

**Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH204 Contains isocyanates. May produce an allergic reaction.

Restricted to professional users.

**2.3 Other hazards**
**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: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-Butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336, EUH066	25-50%
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17	Hexamethylene diisocyanate, oligomers ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	25-50%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-Methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	10-25%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	Xylene ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2.5-<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:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

**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 rinse with water.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

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

No further relevant information available.

(Contd. on page 3)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 2)

- **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:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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<sub>x</sub>)  
Carbon monoxide (CO)  
Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **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 section 13.  
Ensure adequate ventilation.  
Contain and collect spillages with non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth) and place in a suitable container.  
Decontaminate immediately with suitable mixture (flammable):
  - as such usable (inflammatory!):

water	45 Vol.%
ethanol or isopropanol	50 Vol.%
ammonia solution (Density= 0.88)	5 Vol.%
  - alternatively (non-flammable):

sodium carbonate	5 Vol.%
water	95 Vol.%
Add the same decontaminant to any residues and allow to stand for several days in a non-sealed container until no further reaction occurs. Once this stage is reached, close the container and dispose of in accordance with the waste regulations (see Section 13).
- **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 good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Persons with a history of asthma, allergies or chronic or recurrent respiratory diseases should only be employed in processes in which this product is used under appropriate medical supervision.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.

(Contd. on page 4)

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 3)

Protect against electrostatic charges.

**7.2 Conditions for safe storage, including any incompatibilities**
**Storage:**
**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:**

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

Store away from foodstuffs.

**Further information about storage conditions:**

Keep container tightly sealed.

Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohol and water.

**Storage class:** 3

**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:**
**123-86-4 n-Butyl acetate**

WEL	Short-term value: 966 mg/m <sup>3</sup> , 200 ppm Long-term value: 724 mg/m <sup>3</sup> , 150 ppm
-----	---

**28182-81-2 Hexamethylene diisocyanate, oligomers**

EBW	Short-term value: 0.5 mg/m <sup>3</sup> exposition evaluation valu TRGS 430 (EBW)
-----	--

**108-65-6 2-Methoxy-1-methylethyl acetate**

WEL	Short-term value: 548 mg/m <sup>3</sup> , 100 ppm Long-term value: 274 mg/m <sup>3</sup> , 50 ppm Sk
-----	--

**1330-20-7 Xylene**

WEL	Short-term value: 441 mg/m <sup>3</sup> , 100 ppm Long-term value: 220 mg/m <sup>3</sup> , 50 ppm Sk; BMGV
-----	--

**Ingredients with biological limit values:**
**1330-20-7 Xylene**

BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
------	--

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**
**Appropriate engineering controls** No further data; see section 7.

**Individual protection measures, such as personal protective equipment**

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

**General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

(Contd. on page 5)

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 4)

- **Respiratory protection:**  
Filter A/P2 (EN 141, EN 143)



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.

- **Hand protection**



Protective gloves (EN 374)

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

- **Material of gloves**  
Butyl rubber, BR

Recommended thickness of the material:  $\geq 0.7$  mm

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.

- **Breakthrough time of glove material**

For the mixture of chemicals the penetration time has to be at least 60 minutes (Permeation according to EN 374 Part 3: Level 3).

- **Eye/face protection**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

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

- **General Information**

- **Physical state**

Fluid

- **Colour:**

According to product specification

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

Undetermined.

- **Boiling point or initial boiling point and boiling range**

124-128 °C (123-86-4 n-Butyl acetate)

- **Flammability**

Flammable.

- **Lower and upper explosion limit**

- **Lower:**

1.2 Vol % (123-86-4 n-Butyl acetate)

- **Upper:**

10.8 Vol % (108-65-6 2-Methoxy-1-methylethyl acetate)

- **Flash point:**

27 °C (DIN 53213)

- **Auto-ignition temperature:**

315 °C (DIN 51794, 108-65-6 2-Methoxy-1-methylethyl acetate)

- **Decomposition temperature:**

Not determined.

- **pH**

Not determined.

- **Viscosity:**

- **Kinematic viscosity at 20 °C**

10-15 s (DIN 53211/4)

- **Dynamic:**

Not determined.

(Contd. on page 6)

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 5)

<ul style="list-style-type: none"> <li>· <b>Solubility</b></li> <li>· <b>water:</b> Not miscible or difficult to mix.</li> <li>· <b>Partition coefficient n-octanol/water (log value)</b> Not determined.</li> <li>· <b>Vapour pressure at 20 °C:</b> 10.7 hPa (123-86-4 n-Butyl acetate)</li> <li>· <b>Vapour pressure at 50 °C:</b> 55 hPa</li> <li>· <b>Density and/or relative density</b></li> <li>· <b>Density at 20 °C:</b> 0.976 g/cm<sup>3</sup> (DIN 53217)</li> <li>· <b>Relative density</b> Not determined.</li> <li>· <b>Vapour density</b> Not determined.</li> </ul>
<ul style="list-style-type: none"> <li>· <b>9.2 Other information</b></li> <li>· <b>Appearance:</b></li> <li>· <b>Form:</b> Fluid</li> <li>· <b>Important information on protection of health and environment, and on safety.</b></li> <li>· <b>Ignition temperature:</b> Product is not selfigniting.</li> <li>· <b>Explosive properties:</b> Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</li> <li>· <b>Solvent content:</b></li> <li>· <b>VOC (EC)</b> 63.95 %</li> <li>· <b>Solids content (weight-%):</b> 36.0 %</li> <li>· <b>Change in condition</b></li> <li>· <b>Evaporation rate</b> Not determined.</li> </ul>
<ul style="list-style-type: none"> <li>· <b>Information with regard to physical hazard classes</b></li> <li>· <b>Explosives</b> Void</li> <li>· <b>Flammable gases</b> Void</li> <li>· <b>Aerosols</b> Void</li> <li>· <b>Oxidising gases</b> Void</li> <li>· <b>Gases under pressure</b> Void</li> <li>· <b>Flammable liquids</b> Flammable liquid and vapour.</li> <li>· <b>Flammable solids</b> Void</li> <li>· <b>Self-reactive substances and mixtures</b> Void</li> <li>· <b>Pyrophoric liquids</b> Void</li> <li>· <b>Pyrophoric solids</b> Void</li> <li>· <b>Self-heating substances and mixtures</b> Void</li> <li>· <b>Substances and mixtures, which emit flammable gases in contact with water</b> Void</li> <li>· <b>Oxidising liquids</b> Void</li> <li>· <b>Oxidising solids</b> Void</li> <li>· <b>Organic peroxides</b> Void</li> <li>· <b>Corrosive to metals</b> Void</li> <li>· <b>Desensitised explosives</b> Void</li> </ul>

**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.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

(Contd. on page 7)



**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 6)

· **10.6 Hazardous decomposition products:**

- Possible in traces.
- Nitrogen oxides
- Hydrogen chloride (HCl)
- Hydrogen cyanide (prussic acid)
- Carbon monoxide
- Nitrogen oxides (NOx)

\* **SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **STOT-single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.

\* **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
- The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
- Water hazard class 1 (German Regulation) : 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.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

\* **SECTION 14: Transport information**

- |                                       |                               |
|---------------------------------------|-------------------------------|
| · <b>14.1 UN number or ID number</b>  |                               |
| · <b>ADR, IMDG, IATA</b>              | UN1263                        |
| · <b>14.2 UN proper shipping name</b> |                               |
| · <b>ADR</b>                          | UN1263 PAINT RELATED MATERIAL |
| · <b>IMDG, IATA</b>                   | PAINT RELATED MATERIAL        |

(Contd. on page 8)

**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 7)

**· 14.3 Transport hazard class(es)**
**· ADR**


· **Class** 3 (F1) Flammable liquids.  
 · **Label** 3

**· IMDG, IATA**


· **Class** 3 Flammable liquids.  
 · **Label** 3

**· 14.4 Packing group**

· **ADR, IMDG, IATA** III

**· 14.5 Environmental hazards:**

· **Marine pollutant:** No

**· 14.6 Special precautions for user**

· **Hazard identification number (Kemler code):** 30  
 · **EMS Number:** F-E, S-E  
 · **Stowage Category** A

**· 14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

**· Transport/Additional information:**
**· ADR**

· **Limited quantities (LQ)** 5L  
 · **Transport category** 3  
 · **Tunnel restriction code** D/E

**· IMDG**

· **Limited quantities (LQ)** 5L

**· UN "Model Regulation":**

UN 1263 PAINT RELATED MATERIAL, 3, III

**SECTION 15: Regulatory information**
**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
**· Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

(Contd. on page 9)



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 6 (replaces version 5)

Revision: 16.11.2023

**Trade name: Mipa PU 912-25 2K-PU-Härter**

(Contd. of page 8)

- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials, Annex II:**

Class	Share in %
NK	50-100

- **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**

- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- EUH066 Repeated exposure may cause skin dryness or cracking.
- EUH204 Contains isocyanates. May produce an allergic reaction.

- **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

- **Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organisation
- 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)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- 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
- Skin Sens. 1: Skin sensitisation – Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1

- **\* Data compared to the previous version altered.**