Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

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

· **1.1 Product identifier**

· **Trade name: Mipa 2K-MS-Härter MS 10**
· **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
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
· **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 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(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.

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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	50-100%
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	2.5-<10%
CAS: 112-07-2 EINECS: 203-933-3 Reg.nr.: 01-2119475112-47	2-Butoxyethyl acetate Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	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.
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.11.2023 Version number 30 (replaces version 29) Revision: 13.11.2023

Trade name: Mipa 2K-MS-Härter MS 10

(Contd. of page 2)

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, 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**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Hydrogen cyanide (HCN)
· **5.3 Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Keep contaminated washing water and dispose of appropriately.
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 an 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**
Use only in well ventilated areas.
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.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(Contd. of page 3)

· ***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:*** *Store only in the original receptacle.*
· ***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/m³, 200 ppm* *Long-term value: 724 mg/m³, 150 ppm*
28182-81-2 Hexamethylene diisocyanate, oligomers	
EBW	*Short-term value: 0.5 mg/m³* *exposition evaluation valu TRGS 430 (EBW)*
108-65-6 2-Methoxy-1-methylethyl acetate	
WEL	*Short-term value: 548 mg/m³, 100 ppm* *Long-term value: 274 mg/m³, 50 ppm* *Sk*
112-07-2 2-Butoxyethyl acetate	
WEL	*Short-term value: 332 mg/m³, 50 ppm* *Long-term value: 133 mg/m³, 20 ppm* *Sk*

· ***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 protecitve equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.
· ***General protective and hygienic measures:***
Apply solvent resistant skin cream before starting work.
Do not eat, drink, smoke or sniff while working.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
· ***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.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(Contd. of page 4)

· ***Hand protection***
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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: ≥ 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*** *Value for the permeation: Level ≤ 2*
· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Nitrile rubber, NBR
· ***Eye/face protection***

Tightly sealed goggles

· ***Body protection:*** *Protective work clothing*

*

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:***	*7.5 Vol % (123-86-4 n-Butyl 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***	*13 s (DIN 53211/4)*
· ***Dynamic:***	*Not determined.*
· ***Solubility***	
· ***water:***	*Not miscible or difficult to mix.*
· ***Partition coefficient n-octanol/water (log value)***	*Not determined.*

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(Contd. of page 5)

· **Vapour pressure at 20 °C:**	10.7 hPa (123-86-4 n-Butyl acetate)
· **Vapour pressure at 50 °C:**	55 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	0.974 g/cm³ (DIN 53217)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent content:**	
· **VOC (EC)**	63.92 %
· **Solids content (weight-%):**	36.1 %
· **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**	Flammable liquid and vapour.
· **Flammable solids**	Void
· **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** 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** Reacts with alcohols, amines, aqueous acids and alkalis.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Possible in traces.
Nitrogen oxides
Hydrogen chloride (HCl)

(Contd. on page 7)

(Contd. of page 6)

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.

· **LD/LC50 values relevant for classification:**		
123-86-4 n-Butyl acetate		
Oral	LD50	13,100 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

· **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 be specially treated adhering to official regulations.
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.
· **Recommended cleansing agents:** Diluted caustic solution.

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SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1263

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(Contd. of page 7)

· **14.2 UN proper shipping name**	
· **ADR**	UN1263 PAINT RELATED MATERIAL
· **IMDG, IATA**	PAINT RELATED MATERIAL
· **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**	Warning: Flammable liquids.
· **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 13.11.2023 *Version number 30 (replaces version 29)* *Revision: 13.11.2023*

Trade name: Mipa 2K-MS-Härter MS 10

(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.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
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:***
ICAO: International Civil Aviation Organisation
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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 Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· **** Data compared to the previous version altered.***