

1 Identification

- **Product identifier**
- **Trade name: Mipa 2K-HS-Härter HS 35**
- **Application of the substance / the mixture** Hardening agent/ Curing agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MIPA SE
Am Oberen Moos 1
D-84051 Essenbach
Tel.: +49(0)8703-922-0
Fax.: +49(0)8703-922-100
e-mail: sdb-registratur@mipa-paints.com
www.mipa-paints.com
- Fleetwood Products Inc.
13 American Way Suite 15
USA - NJ 08884 Spotswood
Tel.: +1 7324169590
e.mail: fleet089@hotmail.com
- **Emergency telephone number:**
International: 011 49(0)700 24112112 (MIP)
US: +1 872 5888271 (MIP)
US Emergency Telephone Number (for transportation incidents only): 1-800-535-5053 (Infotrac)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3

H226

Flammable liquid and vapor.



GHS07

Acute Toxicity - Inhalation 4

H332

Harmful if inhaled.

Sensitization - Skin 1

H317

May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure 3 H335-H336 May cause respiratory irritation.
May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**

Hexamethylene diisocyanate, oligomers

2-Butoxyethyl acetate

2-Methoxy-1-methylethyl acetate

n-Butyl acetate

- **Hazard statements**

H226 Flammable liquid and vapor.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

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Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.

Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Other hazards

Results of PBT and vPvB assessment

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

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

28182-81-2	Hexamethylene diisocyanate, oligomers	50-100%
112-07-2	2-Butoxyethyl acetate	10-25%
108-65-6	2-Methoxy-1-methylethyl acetate	10-25%
123-86-4	n-Butyl acetate	5-<10%

4 First-aid measures

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.
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 rinse with water.

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

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **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.
- **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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

28182-81-2	Hexamethylene diisocyanate, oligomers	7.8 mg/m ³
112-07-2	2-Butoxyethyl acetate	15 ppm
108-65-6	2-Methoxy-1-methylethyl acetate	50 ppm
123-86-4	n-Butyl acetate	5 ppm
822-06-0	hexamethylene-di-isocyanate	0.018 ppm
77-58-7	dibutyltin dilaurate	1.1 mg/m ³

· PAC-2:

28182-81-2	Hexamethylene diisocyanate, oligomers	86 mg/m ³
112-07-2	2-Butoxyethyl acetate	35 ppm
108-65-6	2-Methoxy-1-methylethyl acetate	1,000 ppm
123-86-4	n-Butyl acetate	200 ppm
822-06-0	hexamethylene-di-isocyanate	0.2 ppm
77-58-7	dibutyltin dilaurate	8 mg/m ³

· PAC-3:

28182-81-2	Hexamethylene diisocyanate, oligomers	510 mg/m ³
112-07-2	2-Butoxyethyl acetate	210 ppm
108-65-6	2-Methoxy-1-methylethyl acetate	5000* ppm
123-86-4	n-Butyl acetate	3000* ppm
822-06-0	hexamethylene-di-isocyanate	3 ppm

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77-58-7	dibutyltin dilaurate	(Contd. of page 3) 48 mg/m ³
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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 3
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

112-07-2 2-Butoxyethyl acetate	
REL	Long-term value: 33 mg/m ³ , 5 ppm
TLV	Long-term value: 20 ppm A3
108-65-6 2-Methoxy-1-methylethyl acetate	
WEEL	Long-term value: 50 ppm
123-86-4 n-Butyl acetate	
PEL	Long-term value: 710 mg/m ³ , 150 ppm
REL	Short-term value: 950 mg/m ³ , 200 ppm Long-term value: 710 mg/m ³ , 150 ppm
TLV	Short-term value: 150 ppm Long-term value: 50 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
Filter A/P2

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In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

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

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	124-128 °C (255.2-262.4 °F)

· **Flash point:** 30 °C (86 °F) (DIN 53213)

· **Flammability (solid, gaseous):** Flammable.

· **Ignition temperature:** 280 °C (536 °F) (DIN 51794)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

· Lower:	1.5 Vol %
· Upper:	10.8 Vol %

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· Vapor pressure at 20 °C (68 °F):	10.7 hPa (8 mm Hg)
· Density at 20 °C (68 °F):	1.05 g/cm ³ (8.762 lbs/gal) (DIN 53217)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic at 20 °C (68 °F):	18 s (DIN 53211/4)
· Solvent content:	
· VOC content:	45.89 % 482 g/l / 4.0 lb/gal
· Solids content (weight-%):	54.1 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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- **OSHA-Ca (Occupational Safety & Health Administration)**
- None of the ingredients is listed.


12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.


14 Transport information


- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1263
- **UN proper shipping name**
- **DOT** Paint related material
- **ADR** UN1263 PAINT RELATED MATERIAL
- **IMDG, IATA** PAINT RELATED MATERIAL
- **Transport hazard class(es)**
- **DOT**
-  A red diamond-shaped hazard label with a flame icon and the text 'FLAMMABLE LIQUID' and the number '3' at the bottom.
- **Class** 3 Flammable liquids

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· Label	3
· ADR	
	
· Class	3 (F1) Flammable liquids
· Label	3

· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3

· Packing group	
· DOT, ADR, IMDG, IATA	III

· Environmental hazards:	
· Marine pollutant:	No

· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, S-E
· Stowage Category	A

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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 · **Transport/Additional information:**

· ADR	
· Limited quantities (LQ)	5L

· IMDG	
· Limited quantities (LQ)	5L

· UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III
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15 Regulatory information

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

 · **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

 · **Section 313 (Specific toxic chemical listings):**

112-07-2 2-Butoxyethyl acetate

822-06-0 hexamethylene-di-isocyanate

 · **Hazardous Air Pollutants**

822-06-0 hexamethylene-di-isocyanate

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· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

112-07-2	2-Butoxyethyl acetate	A3	10-25%
77-58-7	dibutyltin dilaurate	A4	<0.1%

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS02 GHS07

· Signal word Warning

· Hazard-determining components of labeling:

Hexamethylene diisocyanate, oligomers
2-Butoxyethyl acetate
2-Methoxy-1-methylethyl acetate
n-Butyl acetate

· Hazard statements

H226 Flammable liquid and vapor.
H332 Harmful if inhaled.
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/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.

· National regulations:

· Additional classification according to Decree on Hazardous Materials:

Class	Share in %
NK	25-50

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Trade name: Mipa 2K-HS-Härter HS 35

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Contact:**

· **Date of preparation / last revision** 03/01/2023

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 3: Flammable liquids – Category 3

Acute Toxicity - Inhalation 4: Acute toxicity – Category 4

Sensitization - Skin 1: Skin sensitisation – Category 1

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**