Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.06.2016 Version number 128 Revision: 21.04.2016

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

· **1.1 Product identifier**

· **Trade name: 2K-Härter H 5**

· **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(0)8703-922-0
Fax.: +49(0)8703-922-100
e-mail: sdb-registratur@mipa-paints.com
www.mipa-paints.com

· **1.4 Emergency telephone number:** +49(0)700 24112112 (MIP)

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2 Hazards identification

· **2.1 Classification of the substance or mixture**

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

GHS02 flame

Flam. Liq. 2	H225	Highly flammable liquid and vapour.

GHS07

Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

· **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

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Hexamethylene diisocyanate, oligomers
n-butyl acetate
ethyl acetate
4-isocyanatosulphonyltoluene
dibutyltin dilaurate

· **Hazard statements**

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.

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H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.

· **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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3 Composition/information on ingredients

· **3.2 Chemical characterisation: 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	50-100%
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17 01-2119488934-20	Hexamethylene diisocyanate, oligomers Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-<25%
CAS: 77-58-7 EINECS: 201-039-8 Reg.nr.: 01-2119496068-27	dibutyltin dilaurate Muta. 2, H341; Repr. 1B, H360FD; STOT SE 1, H370; STOT RE 1, H372; Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	0.1-<0.3%
CAS: 4083-64-1 EINECS: 223-810-8	4-isocyanatosulphonyltoluene Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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

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· ***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 wash with water and soap and rinse thoroughly.*
· ***After eye contact:*** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
· ***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.

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5 Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:*** *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 (NOx)
Carbon monoxide (CO)
Hydrogen cyanide (HCN)
· ***5.3 Advice for firefighters***
· ***Protective equipment:*** *Mouth respiratory protective device.*

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6 Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective equipment. Keep unprotected persons away.
· ***6.2 Environmental precautions:***
Inform respective authorities in case of seepage into water course or sewage system.
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 item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
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.

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7 Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
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.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **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 in cool, dry conditions in well sealed receptacles.
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.

*
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:**	
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)
141-78-6 ethyl acetate	
WEL	Short-term value: 400 ppm Long-term value: 200 ppm
77-58-7 dibutyltin dilaurate	
WEL	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Sk

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

· **8.2 Exposure controls**
· **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:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.

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

Protective gloves (EN 374)

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

· ***Breakthrough time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· ***Eye protection:***

Tightly sealed goggles

*

9 Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Fluid*
Colour:	*According to product specification*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*Not determined.*
· ***pH-value:***	*Not determined.*
· ***Change in condition***	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*77 °C*
· ***Flash point:***	*14 °C (DIN 53213)*
· ***Flammability (solid, gaseous):***	*Not applicable.*
· ***Ignition temperature:***	*370 °C (DIN 51794)*
· ***Decomposition temperature:***	*Not determined.*

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· ***Self-igniting:***	*Product is not selfigniting.*
· ***Danger of explosion:***	*Product is not explosive. However, formation of explosive air/vapour mixtures are possible.*
· ***Explosion limits:***	
Lower:	*1.2 Vol %*
Upper:	*11.5 Vol %*
· ***Vapour pressure at 20 °C:***	*97 hPa*
· ***Density at 20 °C:***	*0.964 g/cm³ (DIN 53217)*
· ***Relative density***	*Not determined.*
· ***Vapour 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:	*13 s (DIN 53211/4)*
· ***Solvent content:***	
VOC (EC)	*65.48 %*
Solids content (weight-%):	*34.5 %*
· ***9.2 Other information***	*No further relevant information available.*

*

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.*
· ***10.6 Hazardous decomposition products:***
Possible in traces.
Nitrogen oxides
Hydrogen chloride (HCl)
Hydrogen cyanide (prussic acid)
Carbon monoxide
Nitrogen oxides (NOx)

*

11 Toxicological information

· ***11.1 Information on toxicological effects***
· ***Acute toxicity*** *Based on available data, the classification criteria are not met.*
· ***Primary irritant effect:***
· ***Skin corrosion/irritation*** *Based on available data, the classification criteria are not met.*
· ***Serious eye damage/irritation***
Causes serious eye irritation.
· ***Respiratory or skin sensitisation***
May cause an allergic skin reaction.

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· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity*** *Based on available data, the classification criteria are not met.*
· ***Carcinogenicity*** *Based on available data, the classification criteria are not met.*
· ***Reproductive toxicity*** *Based on available data, the classification criteria are not met.*
· ***STOT-single exposure***
May cause respiratory irritation. May cause drowsiness or dizziness.
· ***STOT-repeated exposure*** *Based on available data, the classification criteria are not met.*
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

*
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.*
· ***Ecotoxical effects:***
· ***Remark:*** *Harmful to fish*
· ***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.
Harmful to aquatic organisms
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

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 01 11**	*waste paint and varnish containing organic solvents or other hazardous substances*

· ***Uncleaned packaging:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*

*
14 Transport information

· ***14.1 UN-Number***	
· ***ADR, IMDG, IATA***	*UN1263*
· ***14.2 UN proper shipping name***	
· ***ADR***	*UN1263 PAINT RELATED MATERIAL, special provision 640D*
· ***IMDG***	*PAINT RELATED MATERIAL*
· ***IATA***	*Paint related material*

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· **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**	II
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-E
· **Stowage Category**	B
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **UN "Model Regulation":**	UN 1263 PAINT RELATED MATERIAL, SPECIAL PROVISION 640D, 3, II

*

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

· **National regulations:**

Class	Share in %
I	0.1-<1
NK	50-100

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

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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***
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
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.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H360FD May damage fertility. May damage the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· ***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 européen sur le transport 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. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Repr. 1B: Reproductive toxicity, Hazard Category 1B
STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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