

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

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

1.1 Product identifier

Product code	:	47353705
Trade name	:	IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)
Unique Formula Identifier (UFI)	:	29SK-70M1-800R-2YXS

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

Use of the Substance/Mixture	:	SU19 Building and construction work Professional and consumer use of coatings, Roller application or brushing, Non industrial spraying PC9a Coatings and paints, thinners, paint removers
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1.3 Details of the supplier of the safety data sheet

Company	:	Helios TBLUS d.o.o. Količevo 65 1230 Domžale Slovenia
Telephone Company	:	386 (1) 722 4383
Telefax Company	:	386 (1) 722 4310
Responsible/issuing person	:	386 (1) 722 4383 productsafety@helios.si

1.4 Emergency telephone number

Call 999 (or 112) for emergency medical attention
professionals only: National Poison Information Service (NPIS) 24h national number 0844 892 0111
consumer: National Health Service (NHS) 24h national number, England & Scotland 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Eye irritation, Category 2
Respiratory sensitisation, Category 1

H319: Causes serious eye irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H336: May cause drowsiness or dizziness.

Skin sensitisation, Category 1
Specific target organ toxicity - single exposure, Category 3, Central nervous system

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :
H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336 May cause drowsiness or dizziness.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

SAFETY DATA SHEET

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Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

disposal plant.

Hazardous components which must be listed on the label:

n-butyl acetate
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidenetriethanol
homopolymer aliphatic aromatic
aromatic polyisocyanate
m-tolylidene diisocyanate
hexamethylene-di-isocyanate
4-methyl-m-phenylene diisocyanate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
n-butyl acetate	123-86-4 204-658-1 607-025-00-1 01-2119485493-29	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) EUH066	>= 30 - < 50
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidenetriethanol	53317-61-6 500-120-8	Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 30 - < 50
ethyl acetate	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system) EUH066	>= 1 - < 10

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version
1.0

Revision Date:
08.03.2021

SDS Number:
MAT000473537
GB / EN

Date of last issue: -
Date of first issue: 08.03.2021

homopolymer aliphatic aromatic	26426-91-5	Eye Irrit. 2; H319 Skin Sens. 1; H317	$\geq 1 - < 10$
aromatic polyisocyanate	9017-01-0	Eye Irrit. 2; H319 Skin Sens. 1; H317	$\geq 1 - < 10$
m-tolylidene diisocyanate	26471-62-5 247-722-4 615-006-00-4 01-2119454791-34	Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412 specific concentration limit Resp. Sens. 1; H334 $\geq 0,1 \%$	$\geq 0,1 - < 0,25$
hexamethylene-di-isocyanate	822-06-0 212-485-8 615-011-00-1 01-2119457571-37	Acute Tox. 4; H302 Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 (Respiratory system) specific concentration limit Resp. Sens. 1; H334 $\geq 0,5 \%$ Skin Sens. 1; H317 $\geq 0,5 \%$	$< 0,1$
4-methyl-m-phenylene diisocyanate	584-84-9 209-544-5 615-006-00-4 01-2119486974-18	Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412 specific concentration limit	$\geq 0,025 - < 0,1$

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version 1.0	Revision Date: 08.03.2021	SDS Number: MAT000473537 GB / EN	Date of last issue: - Date of first issue: 08.03.2021
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Resp. Sens. 1; H334 ≥ 0,1 %

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- | | | |
|---|---|---|
| Advice on safe handling | : | Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Container may be opened only under exhaust ventilation hood.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. |
| Advice on protection against fire and explosion | : | Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. |
| Hygiene measures | : | When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday. |

7.2 Conditions for safe storage, including any incompatibilities

- | | | |
|---|---|--|
| Requirements for storage areas and containers | : | No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. |
| Further information on storage stability | : | No decomposition if stored and applied as directed. |

7.3 Specific end use(s)

- | | | |
|-----------------|---|---|
| Specific use(s) | : | For further information, refer to the product technical data sheet. |
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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version
1.0

Revision Date:
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SDS Number:
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GB / EN

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m ³	GB EH40
		STEL	200 ppm 966 mg/m ³	GB EH40
		STEL	150 ppm 723 mg/m ³	2019/1831/EU
	Further information: Indicative			
		TWA	50 ppm 241 mg/m ³	2019/1831/EU
	Further information: Indicative			
ethyl acetate	141-78-6	STEL	400 ppm 1.468 mg/m ³	2017/164/EU
	Further information: Indicative			
		TWA	200 ppm 734 mg/m ³	2017/164/EU
	Further information: Indicative			
		TWA	200 ppm 734 mg/m ³	GB EH40
		STEL	400 ppm 1.468 mg/m ³	GB EH40
m-tolylidene diisocyanate	26471-62-5	TWA	0,02 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0,07 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
hexamethylene-diisocyanate	822-06-0	TWA	0,02 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0,07 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
4-methyl-m-phenylene diisocyanate	584-84-9	TWA	0,02 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0,07 mg/m ³ (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version
1.0

Revision Date:
08.03.2021

SDS Number:
MAT000473537
GB / EN

Date of last issue: -
Date of first issue: 08.03.2021

m-tolylidene diisocyanate	26471-62-5	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT
hexamethylene-di-isocyanate	822-06-0	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT
4-methyl-m-phenylene diisocyanate	584-84-9	isocyanate-derived diamine (Isocyanates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
n-butyl acetate	Workers	Inhalation	Acute systemic effects	600 mg/m ³
	Workers	Inhalation	Acute local effects	600 mg/m ³
	Workers	Inhalation	Long-term systemic effects	48 mg/m ³
	Workers	Inhalation	Long-term local effects	300 mg/m ³
	Consumers	Inhalation	Acute systemic effects	300 mg/m ³
	Consumers	Inhalation	Acute local effects	300 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	12 mg/m ³
	Consumers	Inhalation	Long-term local effects	35,7 mg/m ³
	Consumers	Dermal	Long-term systemic effects	3,4 mg/kg bw/day
	Consumers	Dermal	Acute systemic effects	6 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	2 mg/kg bw/day
	Consumers	Oral	Acute systemic effects	2 mg/kg bw/day
ethyl acetate	Workers	Dermal	Long-term systemic effects	7 mg/kg bw/day
	Workers	Dermal	Acute systemic effects	11 mg/kg bw/day
	Workers	Inhalation	Acute systemic effects	1468 mg/m ³
	Workers	Inhalation	Long-term local effects	1468 mg/m ³
	Workers	Inhalation	Long-term systemic effects	734 mg/m ³

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version
1.0

Revision Date:
08.03.2021

SDS Number:
MAT000473537
GB / EN

Date of last issue: -
Date of first issue: 08.03.2021

	Workers	Inhalation	Long-term local effects	734 mg/m3
	Consumers	Inhalation	Acute systemic effects	734 mg/m3
	Consumers	Inhalation	Acute local effects	734 mg/m3
	Consumers	Inhalation	Long-term systemic effects	367 mg/m3
	Consumers	Inhalation	Long-term local effects	367 mg/m3
	Workers	Dermal	Long-term systemic effects	63 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects	37 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	4,5 mg/kg bw/day
m-tolylidene diisocyanate	Workers	Inhalation	Long-term systemic effects	0,035 mg/m3
	Workers	Inhalation	Acute systemic effects	0,14 mg/m3
	Workers	Inhalation	Long-term local effects	0,035 mg/m3
	Workers	Inhalation	Acute systemic effects	0,14 mg/m3
hexamethylene-diisocyanate	Workers	Inhalation	Long-term systemic effects	0,035 mg/m3
	Workers	Inhalation	Acute systemic effects	0,07 mg/m3
	Workers	Inhalation	Long-term local effects	0,035 mg/m3
	Workers	Inhalation	Acute local effects	0,07 mg/m3
4-methyl-m-phenylene diisocyanate	Workers	Inhalation	Long-term systemic effects	0,035 mg/m3
	Workers	Inhalation	Acute systemic effects	0,14 mg/m3
	Workers	Inhalation	Long-term local effects	0,035 mg/m3
	Workers	Inhalation	Acute local effects	0,14 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
n-butyl acetate	Soil	0,0903 mg/kg dry weight (d.w.)
	Marine water	0,018 mg/l
	Fresh water	0,18 mg/l
	Marine sediment	0,0981 mg/kg dry weight (d.w.)
	Fresh water sediment	0,981 mg/kg dry weight (d.w.)
	Sewage treatment plant	35,6 mg/l
	Intermittent use/release	0,36 mg/l

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version
1.0

Revision Date:
08.03.2021

SDS Number:
MAT000473537
GB / EN

Date of last issue: -
Date of first issue: 08.03.2021

ethyl acetate	Soil	0,24 mg/kg dry weight (d.w.)
	Marine water	0,026 mg/l
	Fresh water	0,26 mg/l
	Marine sediment	0,125 mg/kg dry weight (d.w.)
	Fresh water sediment	1,25 mg/kg dry weight (d.w.)
	Sewage treatment plant	650 mg/l
	Intermittent use/release	1,65 mg/l
m-tolylidene diisocyanate	Soil	1 mg/kg dry weight (d.w.)
	Marine water	0,00125 mg/l
	Fresh water	0,0125 mg/l
	Sewage treatment plant	1 mg/l
	Intermittent use/release	0,125 mg/l
hexamethylene-di-isocyanate	Soil	0,0026 mg/kg dry weight (d.w.)
	Marine water	0,00774 mg/l
	Fresh water	0,0774 mg/l
	Marine sediment	0,001344 mg/kg dry weight (d.w.)
	Fresh water sediment	0,01334 mg/kg dry weight (d.w.)
	Sewage treatment plant	8,42 mg/l
	Intermittent use/release	0,774 mg/l
4-methyl-m-phenylene diisocyanate	Soil	1 mg/kg dry weight (d.w.)
	Marine water	0,00125 mg/l
	Fresh water	0,0125 mg/l
	Sewage treatment plant	1 mg/l
	Intermittent use/release	0,125 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection

Directive : Equipment should conform to EN 374

Material : Viton®

Rate of permeability : > 480 min

Protective index : Class 6

Material : PVA

Rate of permeability : > 480 min

Protective index : Class 6

Glove thickness : > 0,5 mm

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
GB / EN			

Remarks	: The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The obtained break through times according to EN 374 Part III are not measured under normal operating conditions. Therefore a maximum usage time of 50% of the break through time is recommended. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Nitrile gloves are not suitable. Take note of the information given by the producer concerning permeability, degradation and break through times, and of special work
Skin and body protection	: Long sleeved clothing Safety shoes
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. EN-143; EN-149; EN-529
Filter type	: A/P2
Protective measures	: Wash thoroughly after handling. Avoid contact with skin, eyes and clothing. Keep away from food, drink and animal feedingstuffs.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: in accordance with the product description
Odour	: characteristic
Odour Threshold	: No data available
Melting point/freezing point	: -83,6 °C (calculation method (principal components, lowest value))
Boiling point/boiling range	: 77 °C (calculation method (principal components, lowest value))
Flammability	: Static-accumulating flammable liquid., Combustible Solids
Upper explosion limit / Upper flammability limit	: 11 %(V) (calculation method (principal components, highest value))
Lower explosion limit / Lower flammability limit	: 1,2 %(V) (calculation method (principal components, highest value))
Flash point	: 12 °C
Ignition temperature	: 425 °C (calculation method (principal components, highest value))

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version 1.0	Revision Date: 08.03.2021	SDS Number: MAT000473537 GB / EN	Date of last issue: - Date of first issue: 08.03.2021
----------------	------------------------------	--	--

Decomposition temperature	
Decomposition temperature	: No decomposition if stored and applied as directed. Hazardous decomposition products formed under fire conditions.
pH	: Not applicable
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20,5 mm ² /s (40 °C)
Flow time	: 18 - 21 s at 23 °C Method: DIN 53211 (CF4)
Solubility(ies)	
Water solubility	: immiscible
Solubility in other solvents	: Description: miscible with most organic solvents
Partition coefficient: n-octanol/water	: log Pow: 1,81 (calculation method (principal components, highest value))
Density	: 0,95 - 1,05 g/cm ³

9.2 Other information

Explosives	: Not applicable
Oxidizing properties	: Sustains combustion

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: No decomposition if stored and applied as directed.
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Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	: Heat, flames and sparks.
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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

Adequate ventilation is required.

Heating can release vapours which can be ignited.

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:

n-butyl acetate:

Acute oral toxicity : LD50 Oral (Rat): >= 10.760 mg/kg

Acute dermal toxicity : LD50 (Rabbit): >= 5.000 mg/kg

ethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): >= 5.620 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1600 ppm
Exposure time: 8 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): >= 20.000 mg/kg

m-tolylidene diisocyanate:

Acute inhalation toxicity : Test atmosphere: dust/mist
Assessment: The component/mixture is highly toxic after short term inhalation.

hexamethylene-di-isocyanate:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Assessment: The component/mixture is highly toxic after short

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537 GB / EN	Date of first issue: 08.03.2021

term inhalation.

4-methyl-m-phenylene diisocyanate:

Acute inhalation toxicity : Test atmosphere: dust/mist
Assessment: The component/mixture is highly toxic after short term inhalation.

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Components:

m-tolylidene diisocyanate:

Result : irritating

4-methyl-m-phenylene diisocyanate:

Result : irritating

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Components:

Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propy- lidenetrimethanol:

Result : Eye irritation

ethyl acetate:

Result : Eye irritation

homopolymer aliphatic aromatic:

Result : Eye irritation

aromatic polyisocyanate:

Result : Eye irritation

m-tolylidene diisocyanate:

Result : Eye irritation

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

4-methyl-m-phenylene diisocyanate:

Result : Eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product:

Remarks : Causes sensitisation.

Components:

Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propy- lidenetrimethanol:

Result : Probability or evidence of skin sensitisation in humans

homopolymer aliphatic aromatic:

Result : Probability or evidence of skin sensitisation in humans

aromatic polyisocyanate:

Result : Probability or evidence of skin sensitisation in humans

m-tolyldiene diisocyanate:

Result : Probability of respiratory sensitisation in humans based on
animal testing

Result : Probability or evidence of skin sensitisation in humans

4-methyl-m-phenylene diisocyanate:

Result : Probability of respiratory sensitisation in humans based on
animal testing

Result : Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

m-tolyldiene diisocyanate:

Carcinogenicity - Assess- : Limited evidence of carcinogenicity in animal studies

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version 1.0	Revision Date: 08.03.2021	SDS Number: MAT000473537 GB / EN	Date of last issue: - Date of first issue: 08.03.2021
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ment

4-methyl-m-phenylene diisocyanate:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause drowsiness or dizziness.

Components:

n-butyl acetate:

Assessment : May cause drowsiness or dizziness.

ethyl acetate:

Assessment : May cause drowsiness or dizziness.

m-tolylidene diisocyanate:

Assessment : May cause respiratory irritation.

4-methyl-m-phenylene diisocyanate:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

n-butyl acetate:

Toxicity to algae/aquatic plants : NOEC (Desmodesmus subspicatus (green algae)): > 200 mg/l
EC50 (Desmodesmus subspicatus (green algae)): >= 647,7 mg/l
Exposure time: 72 h

Toxicity to microorganisms : IC50 (Tetrahymena pyriformis): 356 mg/l
Exposure time: 40 h

m-tolylidene diisocyanate:

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

4-methyl-m-phenylene diisocyanate:

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Components:

n-butyl acetate:

Biodegradability : Result: Biodegradable
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Stability in water : Degradation half life: 78 d
pH: 8
Hydrolyses slowly.

Photodegradation : Decomposes rapidly in contact with light.

12.3 Bioaccumulative potential

Components:

n-butyl acetate:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Bioaccumulation : Bioconcentration factor (BCF): 15
Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 1,81

ethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 0,6

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

Waste Code : 08 01 11, waste paint and varnish containing organic solvents or other hazardous substances

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 1263
ADR	:	UN 1263
RID	:	UN 1263
IMDG	:	UN 1263
IATA	:	UN 1263

14.2 UN proper shipping name

ADN	:	PAINT
ADR	:	PAINT
RID	:	PAINT
IMDG	:	PAINT
IATA	:	Paint

14.3 Transport hazard class(es)

ADN	:	3
ADR	:	3
RID	:	3
IMDG	:	3
IATA	:	3

14.4 Packing group

ADN		
Packing group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
Labels	:	3
Remarks	:	Special Provision 640C

ADR		
Packing group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
Labels	:	3
Tunnel restriction code	:	(D/E)
Remarks	:	Special Provision 640C

RID		
Packing group	:	II
Classification Code	:	F1

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Hazard Identification Number : 33
Labels : 3
Remarks : Special Provision 640C

IMDG

Packing group : II
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)

Packing instruction (cargo aircraft) : 364
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft) : 353
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	: Conditions of restriction for the following entries should be considered: Number on list 3
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import	: Not applicable

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

of dangerous chemicals

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P5c FLAMMABLE LIQUIDS

P5c

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

H225	: Highly flammable liquid and vapour.
H226	: Flammable liquid and vapour.
H302	: Harmful if swallowed.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H330	: Fatal 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.
H351	: Suspected of causing cancer.
H412	: Harmful to aquatic life with long lasting effects.
EUH066	: Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Carc.	: Carcinogenicity
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Resp. Sens.	: Respiratory sensitisation
Skin Irrit.	: Skin irritation

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537	Date of first issue: 08.03.2021
		GB / EN	

Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
2019/1831/EU	:	Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	:	UK. Biological monitoring guidance values
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
2019/1831/EU / TWA	:	Limit Value - eight hours
2019/1831/EU / STEL	:	Short term exposure limit
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observed Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Flam. Liq. 2

H225

Classification procedure:

Based on product data or assessment

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



IDEAL hardener for 2K polyurethane parquet lacquer DS glossy (B)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.03.2021	MAT000473537 GB / EN	Date of first issue: 08.03.2021

Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H336	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.