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

· **1.1 Product identifier**

· **Trade name: Mipa Verdünnung UN 21**
· **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** Thinner, Diluent

· **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)

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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.


health hazard

STOT RE 2 H373 May cause damage to the hearing organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
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 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Xylene
Ethylbenzene

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n-Butyl acetate
Cyclohexanone
· ***Hazard statements***
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to the hearing organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
· ***Precautionary statements***
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see on this label).
P331 Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
P362+P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

*
SECTION 3: Composition/information on ingredients

· ***3.2 Mixtures***
· ***Description:*** *Mixture of substances listed below with nonhazardous additions.*

· **Dangerous components:**		
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	Xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	50-100%
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	10-25%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	Ethylbenzene Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	≥10-<25%
CAS: 108-94-1 EINECS: 203-631-1 Reg.nr.: 01-2119453616-35	Cyclohexanone Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335	≥2.5-<3%

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

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Seek immediate medical advice.
· **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.

*
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**
During heating or in case of fire poisonous gases are produced.
· **5.3 Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

*
SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from foodstuffs.

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· ***Further information about storage conditions:*** *Keep container tightly sealed.*
· ***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:***	
1330-20-7 Xylene	
WEL	*Short-term value: 441 mg/m³, 100 ppm* *Long-term value: 220 mg/m³, 50 ppm* *Sk; BMGV*
123-86-4 n-Butyl acetate	
WEL	*Short-term value: 966 mg/m³, 200 ppm* *Long-term value: 724 mg/m³, 150 ppm*
100-41-4 Ethylbenzene	
WEL	*Short-term value: 552 mg/m³, 125 ppm* *Long-term value: 441 mg/m³, 100 ppm* *Sk*
108-94-1 Cyclohexanone	
WEL	*Short-term value: 82 mg/m³, 20 ppm* *Long-term value: 41 mg/m³, 10 ppm* *Sk, BMGV*

· ***Ingredients with biological limit values:***	
1330-20-7 Xylene	
BMGV	*650 mmol/mol creatinine* *Medium: urine* *Sampling time: post shift* *Parameter: methyl hippuric acid*
108-94-1 Cyclohexanone	
BMGV	*2 mmol/mol creatinine* *Medium: urine* *Sampling time: post shift* *Parameter: cyclohexanol*

· ***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***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· ***Respiratory protection:***
Filter A

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.

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· **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**
Fluorocarbon rubber (Viton)
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**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≤ 6

· **Eye/face protection**

Tightly sealed goggles

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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 Vol % (100-41-4 Ethylbenzene)
· **Upper:**	7.8 Vol % (100-41-4 Ethylbenzene)
· **Flash point:**	24 °C (DIN 53213)
· **Auto-ignition temperature:**	370 °C (DIN 51794, 123-86-4 n-Butyl acetate)
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity at 20 °C**	10-15 s (DIN 53211/4)
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	10.7 hPa (123-86-4 n-Butyl acetate)
· **Vapour pressure at 50 °C:**	55 hPa

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· **Density and/or relative density**	
· **Density at 20 °C:**	0.874 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)**	100.00 %
· **Solids content (weight-%):**	0.0 %
· **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** 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:** Carbon monoxide

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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:**		
1330-20-7 Xylene		
Oral	LD50	5,251 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	29 mg/l (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **STOT-single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.
· **STOT-repeated exposure**
May cause damage to the hearing organs through prolonged or repeated exposure.
· **Aspiration hazard** May be fatal if swallowed and enters airways.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

*
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 2 (German Regulation) : hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

*
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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

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SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1993
· **14.2 UN proper shipping name**	
· **ADR**	UN1993 FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, XYLENES)
· **IMDG, IATA**	FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, XYLENES)
· **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 1993 FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, XYLENES), 3, III

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **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:**
· **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**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
· **Classification according to Regulation (EC) No 1272/2008**
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods

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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. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· **** Data compared to the previous version altered.***