

1 Identification

- **Product identifier**
 - **Trade name:** *Mipa 2K-HS-Express-Klarlack ECX 21*
 - **Application of the substance / the mixture** *Clear coating material, Varnish*
 - **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
 - **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)
- Mipa USA Inc.
13 American Way Suite 15
USA - NJ 08884 Spotswood
Tel.: +1 7324169590
e.mail: info@mipa-usa.com*

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Toxic to Reproduction 1B H360 May damage fertility or the unborn child.



GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** *Danger*

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

*5-Methylhexan-2-one
Reaction mass of pentamethyl-piperidylsebacate
1,1,1-Trimethylolpropane
Dibutyltin dilaurate*

- **Hazard statements**

*H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.*

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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.
- P363 Wash contaminated clothing before reuse.
- P403+P235 Store in a well-ventilated place. Keep cool.

Classification system:

NFPA ratings (scale 0 - 4)



HMS-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:

123-92-2	isopentyl acetate	10-25%
123-86-4	n-Butyl acetate	≤20%
763-69-9	Ethyl 3-ethoxypropionate	2.5-<10%
110-12-3	5-Methylhexan-2-one	≥0.1-<2.5%
1065336-91-5	Reaction mass of pentamethyl-piperidylsebacate	≥0.1-<1%
77745-66-5	triisotridecyl phosphite	≥0.1-<1%
77-99-6	1,1,1-Trimethylolpropane	≥0.1-<1%
77-58-7	Dibutyltin dilaurate	≥0.1-<1%
7575-23-7	Pentaerythritol tetrakis(3-mercaptopropionate)	≥0.1-<1%

4 First-aid measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

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. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

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- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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:** No special measures required.

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 section 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:**

123-92-2	isopentyl acetate	100 ppm
123-86-4	n-Butyl acetate	5 ppm
763-69-9	Ethyl 3-ethoxypropionate	1.6 ppm
110-12-3	5-Methylhexan-2-one	50 ppm
77-58-7	Dibutyltin dilaurate	1.1 mg/m ³

· **PAC-2:**

123-92-2	isopentyl acetate	500 ppm
123-86-4	n-Butyl acetate	200 ppm
763-69-9	Ethyl 3-ethoxypropionate	18 ppm
110-12-3	5-Methylhexan-2-one	69 ppm
77-58-7	Dibutyltin dilaurate	3.8 mg/m ³

· **PAC-3:**

123-92-2	isopentyl acetate	3000* ppm
123-86-4	n-Butyl acetate	3000* ppm
763-69-9	Ethyl 3-ethoxypropionate	110 ppm
110-12-3	5-Methylhexan-2-one	190 ppm

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77-58-7 Dibutyltin dilaurate

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23 mg/m³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **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 section 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 other constituents have no known exposure limits.

123-92-2 isopentyl acetate

PEL	Long-term value: 525 mg/m ³ , 100 ppm
REL	Long-term value: 525 mg/m ³ , 100 ppm
TLV	Short-term value: 532 mg/m ³ , 100 ppm Long-term value: 266 mg/m ³ , 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: 712 mg/m ³ , 150 ppm Long-term value: 238 mg/m ³ , 50 ppm

110-12-3 5-Methylhexan-2-one

PEL	Long-term value: 475 mg/m ³ , 100 ppm
REL	Long-term value: 240 mg/m ³ , 50 ppm
TLV	Short-term value: 233 mg/m ³ , 50 ppm Long-term value: 93 mg/m ³ , 20 ppm

77-99-6 1,1,1-Trimethylolpropane

TLV	Long-term value: 3* mg/m ³ , 0.5* ppm *Inhalable fraction and vapor
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77-58-7 Dibutyltin dilaurate

PEL	Long-term value: 0.1 mg/m ³ as Sn
REL	Long-term value: 0.1 mg/m ³ as Sn, Skin
TLV	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ as Sn; A4; Skin

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

· **Exposure controls**

· **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.

· **Breathing equipment:**



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:**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

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

· **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 through 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

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

· **General Information**

· **Appearance:**

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic

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· 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:	27 °C (80.6 °F) (DIN EN ISO 1523:2002)
· Flammability:	Flammable.
· Auto igniting:	355 °C (671 °F) (DIN 51794)
· Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	1.2 Vol %
Upper:	8.5 Vol %
· Vapor pressure at 20 °C (68 °F):	10.7 hPa (8 mm Hg)
· Density at 20 °C (68 °F):	0.996 g/cm ³ (8.312 lbs/gal) (DIN EN ISO 2811-1)
· 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):	20-23 s (DIN 53211/4)
· Solvent content:	
VOC content:	43.29 % 431 g/l / 3.6 lb/gal
Solids content (weight-%):	56.7 %
· 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

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

123-92-2 isopentyl acetate

Oral	LD50	16,000 mg/kg (rat)
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123-86-4 n-Butyl acetate

Oral	LD50	13,100 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

763-69-9 Ethyl 3-ethoxypropionate

Oral	LD50	5,137 mg/kg (rat)
Dermal	LD50	4,073 mg/kg (rat)

110-12-3 5-Methylhexan-2-one

Oral	LD50	3,200 mg/kg (rat)
Dermal	LD50	10,000 mg/kg (rabbit)

77-99-6 1,1,1-Trimethylolpropane

Oral	LD50	14,100 mg/kg (rat)
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7575-23-7 Pentaerythritol tetrakis(3-mercaptopropionate)

Oral	LD50	1,000-2,000 mg/kg (rat)
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· **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:

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.

· **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 2 (Self-assessment): 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.

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- **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:**
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

14 Transport information

· **UN-Number**
· **DOT, ADR/RID/ADN, IMDG, IATA** UN1263

· **UN proper shipping name**
· **DOT** Paint
· **ADR/RID/ADN** UN1263 PAINT
· **IMDG, IATA** PAINT

· **Transport hazard class(es)**
· **DOT**



· **Class** 3 Flammable liquids
· **Label** 3

· **ADR/RID/ADN**



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

· **IMDG, IATA**



· **Class** 3 Flammable liquids
· **Label** 3

· **Packing group**
· **DOT, ADR/RID/ADN, IMDG, IATA** III

· **Environmental hazards:** Not applicable.

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· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, S-E
· Segregation groups	(SGG1) Acids
· 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/RID/ADN	
· Limited quantities (LQ)	5L

· IMDG	
· Limited quantities (LQ)	5L

· UN "Model Regulation":	UN 1263 PAINT, 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):**

None of the ingredients is listed.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Reaction mass of ethylbenzene and xylene

· **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.

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

77-58-7	Dibutyltin dilaurate	A4	≥0.1-<1%
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· **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).

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Trade name: Mipa 2K-HS-Express-Klarlack ECX 21

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Hazard pictograms



GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

5-Methylhexan-2-one
Reaction mass of pentamethyl-piperidylsebacate
1,1,1-Trimethylolpropane
Dibutyltin dilaurate

Hazard statements

H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.

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.
P363 Wash contaminated clothing before reuse.
P403+P235 Store in a well-ventilated place. Keep cool.

National regulations:

Additional classification according to Decree on Hazardous Materials:

Class	Share in %
I	2.5-<10
NK	25-50

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 01/29/2026 / 2

Abbreviations and acronyms:

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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

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Printing date 01/29/2026

Reviewed on 01/29/2026

Trade name: Mipa 2K-HS-Express-Klarlack ECX 21

REL: Recommended Exposure Limit
Flammable Liquids 3: Flammable liquids – Category 3
Sensitization - Skin 1: Skin sensitisation – Category 1
Toxic to Reproduction 1B: Reproductive toxicity – Category 1B
· * **Data compared to the previous version altered.**

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USA