

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 27.06.2023

Version number 1

Revision: 15.06.2023

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

- **1.1 Product identifier**
- **Trade name:** *Pentyl acetate*
- **Chemical Identification:** *Reaction mass of 2-methylbutyl acetate and pentyl acetate*
- **Article number:** *310*
- **Registration number** *01-2119491285-32*
- **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**  
*chemical*  
*Solvent for various applications*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Möller Chemie GmbH & Co. KG*  
*Bürgerkamp 1*  
*D-48565 Steinfurt*  
*Tel.: 02551/9340-0*  
*Fax: 02551/9340-60*
- **Further information obtainable from:** *Product safety department*
- **1.4 Emergency telephone number:**  
*Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240*

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

*Flam. Liq. 3 H226 Flammable liquid and vapour.*

- **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

- **Signal word** *Warning*
- **Hazard statements**  
*H226 Flammable liquid and vapour.*
- **Precautionary statements**

<i>P101</i>	<i>If medical advice is needed, have product container or label at hand.</i>
<i>P102</i>	<i>Keep out of reach of children.</i>
<i>P103</i>	<i>Read carefully and follow all instructions.</i>
<i>P210</i>	<i>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</i>
<i>P240</i>	<i>Ground and bond container and receiving equipment.</i>
<i>P241</i>	<i>Use explosion-proof [electrical/ventilating/lighting] equipment.</i>
<i>P280</i>	<i>Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</i>
<i>P303+P361+P353</i>	<i>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].</i>
<i>P501</i>	<i>Dispose of contents/container in accordance with local/regional/national/international regulations.</i>

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- **Additional information:**  
EUH066 Repeated exposure may cause skin dryness or cracking.
- **2.3 Other hazards**  
The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.
- **Results of PBT and vPvB assessment**
- **PBT:**  
The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).
- **vPvB:**  
The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Reaction mass of 2-methylbutyl acetate and pentyl acetate.

- **Dangerous components:**

CAS: 123-92-2	isopentyl acetate	⚠ Flam. Liq. 3, H226, EUH066	≤4.0%
EINECS: 204-662-3			
Index number: 607-130-00-2			

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

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Rinse out mouth and then drink plenty of water.
- **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:** CO<sub>2</sub>, powder or water spray. Fight larger fire with alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
The product is flammable. Cool endangered containers with water spray jet.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid inhalation.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).  
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.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Electrical equipment must comply with the specified temperature class.  
Temperature class: T2 (ignition temperature > 300 °C)
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep container tightly closed in a cool place.
- **Information about storage in one common storage facility:** See section 10.5
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:**  
3  
flammable
- **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:**

#### 123-92-2 isopentyl acetate

IOELV	Short-term value: 540 mg/m <sup>3</sup> , 100 ppm Long-term value: 270 mg/m <sup>3</sup> , 50 ppm
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- **DNELs**  
worker:  
Long term and short term exposure - local effects, inhalation: 260 mg/m<sup>3</sup>  
Consumer:  
Long term and short term exposure - local effects, inhalation: 130 mg/m<sup>3</sup>
- **PNECs**  
Fresh water: 0.041 mg/l  
Sea water: 0.0041 mg/l  
Sewage treatment plant: 72 mg/l  
Soil: 0.033 mg/kg  
Sediment (seawater): 0.0286 mg/kg  
Sediment (fresh water): 0.286 mg/kg  
sporadic release: 0.41 mg/l
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **Respiratory protection:**  
Respiratory protection if ventilation is inadequate. Gas filter for organic gases/vapors (Boiling point > 65 °C, according to EN 141).

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- **Hand protection**

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**

Butyl rubber, BR

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.

- **Penetration 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/face protection**



Tightly sealed goggles

- **Body protection: Solvent resistant protective clothing**

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Ester-like
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	146 - 149 °C
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	40 °C
· <b>Ignition temperature:</b>	375 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH (10 g/l) at 20 °C</b>	7.3
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic at 20 °C:</b>	ca. 0.92 mPas
· <b>Solubility</b>	
· <b>water at 20 °C:</b>	1.6 g/l (pH 4,6 - 5,8)
· <b>Partition coefficient n-octanol/water (log value) at 25 °C</b>	2.1-2.7 log KOW (pH: 6,3)
· <b>Vapour pressure at 20 °C:</b>	4.91 hPa
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.875-0.877 g/cm <sup>3</sup>
· <b>Relative density at 17 °C</b>	0.879 g/cm <sup>3</sup>
· <b>Vapour density</b>	Not determined.

- **9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.

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· <b>Explosive properties:</b>	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	<i>Not determined.</i>
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	<i>Void</i>
· <b>Flammable gases</b>	<i>Void</i>
· <b>Aerosols</b>	<i>Void</i>
· <b>Oxidising gases</b>	<i>Void</i>
· <b>Gases under pressure</b>	<i>Void</i>
· <b>Flammable liquids</b>	
<i>Flammable liquid and vapour.</i>	
· <b>Flammable solids</b>	<i>Void</i>
· <b>Self-reactive substances and mixtures</b>	<i>Void</i>
· <b>Pyrophoric liquids</b>	<i>Void</i>
· <b>Pyrophoric solids</b>	<i>Void</i>
· <b>Self-heating substances and mixtures</b>	<i>Void</i>
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	<i>Void</i>
· <b>Oxidising liquids</b>	<i>Void</i>
· <b>Oxidising solids</b>	<i>Void</i>
· <b>Organic peroxides</b>	<i>Void</i>
· <b>Corrosive to metals</b>	<i>Void</i>
· <b>Desensitised explosives</b>	<i>Void</i>

### **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**  
*The product is stable if the regulations / instructions for storage and handling are observed.*
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions** *Reacts with strong oxidising agents.*
- **10.4 Conditions to avoid** *Avoid all sources of ignition: heat, sparks, open flames.*
- **10.5 Incompatible materials:** *Strong oxidizing agents*
- **10.6 Hazardous decomposition products:**  
*No hazardous decomposition products if stored and handled as prescribed/indicated become.*

### **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.*
- **Skin corrosion/irritation** *Based on available data, the classification criteria are not met.*
- **Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*
- **Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.*
- **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** *Based on available data, the classification criteria are not met.*
- **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.*

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· **11.2 Information on other hazards**· **Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:**

Fish toxicity:

LC50 (96 h) 69 mg/l, *Pimephales promelas*

Aquatic invertebrates:

EC50 (48 h) 40.9 mg/l, *Daphnia magna*

aquatic plants:

EC50 (72 h) > 466 mg/l (growth rate), *Pseudokirchneriella subcapitata*

Microorganisms/effect on activated sludge:

EC20 (30 min) &gt; 1.000 mg/l

· **12.2 Persistence and degradability** Easily biodegradable· **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:** The product is not considered to be persistent, bioaccumulating nor toxic (PBT).· **vPvB:** The product is not considered to be persistent or very bioaccumulative (vPvB).· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects** No further relevant information available.· **Additional ecological information:**· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**SECTION 13: Disposal considerations**· **13.1 Waste treatment methods**· **Recommendation** Disposal according to local regulations.· **Uncleaned packaging:**· **Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information**· **14.1 UN number or ID number**· **ADR, IMDG, IATA**

UN1104

· **14.2 UN proper shipping name**· **ADR**

1104 AMYL ACETATES

· **IMDG, IATA**

AMYL ACETATES

· **14.3 Transport hazard class(es)**· **ADR, IMDG, IATA**· **Class**

3 Flammable liquids.

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· <b>Label</b>	3
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>Stowage Category</b>	Warning: Flammable liquids. 30 A
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1104 AMYL ACETATES, 3, III

### SECTION 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 The material is not included.
- 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
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.**

EU

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**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**

H226 Flammable liquid and vapour.

EUH066 Repeated exposure may cause skin dryness or cracking.

**· Department issuing SDS: Product safety department****· Contact: Mrs. Steyer****· 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*

*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)*

*DNEL: Derived No-Effect Level (REACH)*

*PNEC: Predicted No-Effect Concentration (REACH)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Liq. 3: Flammable liquids – Category 3*