We create chemistry

Safety data sheet

BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)
Date / Revised: 01.09.2023 Version: 4.0
Product: **PENTYLACETATE**

(ID no. 30034749/SDS_GEN_00/EN)
Date of print 10.10.2025

1. Identification

Product identifier

PENTYLACETATE

Chemical name: Reaction mass of 2-methylbutyl acetate and pentyl acetate

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

Relevant identified uses: Chemical, solvent(s)

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Operating Division Petrochemicals

Telephone: +49 621 60-42151
E-mail address: sds-petrochemicals@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Flam. Liq. 3
Skin Corr./Irrit. 3

Aquatic Acute 3

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Warning

Hazard Statement:

H226	Flammable liquid and vapour.
H316	Causes mild skin irritation.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye protection or face protection.
P243	Take action to prevent static discharges.
P273	Avoid release to the environment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.

Precautionary Statements (Response):

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P332 + P313	If skin irritation occurs: Get medical attention.
P370 + P378	In case of fire: Use … to extinguish.

Precautionary Statements (Storage):

P403 + P235	Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Labeling of special preparations (GHS):
Repeated exposure may cause skin dryness or cracking.

According to UN GHS criteria

Hazard determining component(s) for labelling: Pentyl acetate, 2-Methylbutyl acetate

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

See section 12 - Results of PBT and vPvB assessment.

3. Composition/Information on Ingredients

Substances

Chemical nature

Reaction mass of 2-methylbutyl acetate and pentyl acetate

Hazardous ingredients (GHS)
According to UN GHS criteria

Pentyl acetate

Content (W/W): >= 62 % - <= 70 %	Flam. Liq. 3
CAS Number: 628-63-7	Aquatic Acute 3
EC-Number: 211-047-3	H226, H402
	EUH066

2-Methylbutyl acetate

Content (W/W): >= 26 % - <= 35 %	Flam. Liq. 3
CAS Number: 624-41-9	Skin Corr./Irrit. 3
EC-Number: 210-843-8	H226, H316
	EUH066

Isopentyl acetate

Content (W/W): >= 0 % - <= 4 %	Flam. Liq. 3
CAS Number: 123-92-2	Skin Corr./Irrit. 3
EC-Number: 204-662-3	Aquatic Acute 3
INDEX-Number: 607-130-00-2	Aquatic Chronic 3
	H226, H316, H402, H412
	EUH066

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Wash thoroughly with soap and water

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media
Suitable extinguishing media:
dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Advice for fire-fighters
Special protective equipment:
Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:
Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

8. Exposure Controls/Personal Protection

Exposure controls

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
Manufacturer's directions for use should be observed because of great diversity of types.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g.

temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	ester-like	
Odour threshold:	not determined	
pH value:	7,3 (1 %(m), 20 °C)	(pH Meter)
glass transition temperature:	-82 °C	(OECD Guideline 102)
Boiling point:	144,86 °C (1.013,25 hPa)	(measured)
Flash point:	40 °C	(ISO 13736, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	Flammable.	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	374 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	4,91 hPa (20 °C) static	(measured)
Density:	0,875 - 0,877 g/cm3 (20 °C)	(DIN 51757)
Relative density:	0,879 (17 °C)	(OECD Guideline 109)
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(estimated)

Solubility in water:	1,60 g/l (20 °C, pH 4,6 - 5,8)	(OECD Guideline 105)
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	2,1 - 2,7 (25 °C; pH value: 6,3)	(OECD Guideline 117)
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	0,96 mPa.s (17,8 °C)	(OECD 114)
	0,77 mPa.s (35,6 °C)	(OECD 114)
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

Other information

Self heating ability:	not applicable, the product is a liquid	
pKA:	The substance does not dissociate.	
Adsorption/water - soil:	KOC: 33,79; log KOC: 1,53 Adsorption to solid soil phase is not expected.	(calculated)
Adsorption/water - soil:	KOC: 29,75; log KOC: 1,47 Adsorption to solid soil phase is not expected.	(calculated)
Adsorption/water - soil:	KOC: 28,42; log KOC: 1,45 Adsorption to solid soil phase is not expected.	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Grain size distribution:	The substance / product is marketed or used in a non solid or granular form.	

10. Stability and Reactivity

Reactivity

Corrosion to metals:	Corrosive effects to metal are not anticipated.	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.

Conditions to avoid
No special precautions other than good housekeeping of chemicals.

Incompatible materials

Substances to avoid:
strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:
LD50 rat (oral): > 5.000 mg/kg (similar to OECD guideline 401)

LC50 rat (by inhalation): > 19,25 mg/l 4 h (similar to OECD guideline 403)
No mortality was observed. The vapour was tested.

LD50 rabbit (dermal): 8.300 mg/kg (similar to OECD guideline 402)

LD50 rabbit (dermal): > 14.000 mg/kg (similar to OECD guideline 402)

Irritation

Assessment of irritating effects:
Not irritating to the eyes. May cause slight irritation to the skin.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Slightly irritating. (similar to OECD guideline 404)

Serious eye damage/irritation rabbit: non-irritant (similar to OECD guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:

Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The results were determined in a Screening test (OECD 421/422).

Developmental toxicity

Assessment of teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Experiences in humans

Experimental/calculated data:

Prolonged contact can result in drying of the skin.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No adverse effects were observed after repeated inhalative exposure in animal studies.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:
LC50 (96 h) 69 mg/l, Pimephales promelas (APHA 1971, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates:
EC50 (48 h) 40,9 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:
EC50 (72 h) > 466 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:
EC20 (30 min) > 1.000 mg/l, (OECD Guideline 209, aerobic)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish:
No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates:
No data available regarding toxicity to daphnids.

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Elimination information:
87 % BOD of the ThOD (20 d) (APHA 'Standard Methods', No. 219, 1971) (aerobic, Seawater)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

72 % BOD of the ThOD (20 d) (APHA 'Standard Methods', No. 219, 1971) (aerobic, predominantly domestic sewage, non-adapted)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

57 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of stability in water:
No data available.

Information on Stability in Water (Hydrolysis):
No data available.

Bioaccumulative potential

Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulation potential:
No data available.

Mobility in soil

Assessment transport between environmental compartments:
Volatility: The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Do not release untreated into natural waters.

13. Disposal Considerations

Waste treatment methods

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:
Disposal must be made according to official regulations.

14. Transport Information

Land transport

ADR

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Inland waterway transport

ADN

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
	Marine pollutant: NO

Special precautions for user:	EmS: F-E; S-D

Air transport

IATA/ICAO

UN number or ID number:	UN 1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Flam. Liq.	Flammable liquids
Skin Corr./Irrit.	Skin corrosion/irritation
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H226	Flammable liquid and vapour.
H402	Harmful to aquatic life.
H316	Causes mild skin irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.