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Safety data sheet

BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)
Date / Revised: 28.07.2023 Version: 4.0
Product: **PALATINOL® M**

(ID no. 30034815/SDS_GEN_00/EN)
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1. Identification

Product identifier

PALATINOL® M

Chemical name: dimethyl phthalate
CAS Number: 131-11-3

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

Relevant identified uses: plasticizers

Details of the supplier of the safety data sheet

Company:
BASF SE
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2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

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)

Hazard Statement:
H402 Harmful to aquatic life.

Precautionary Statements (Prevention):
P273 Avoid release to the environment.

Precautionary Statements (Disposal):
P501 Dispose of contents and container to hazardous or special waste collection point.

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

Dimethyl phthalate
CAS Number: 131-11-3
EC-Number: 205-011-6

Hazardous ingredients (GHS)
According to UN GHS criteria

Dimethyl fumarate
Content (W/W): < 10 PPM
CAS Number: 624-49-7
EC-Number: 210-849-0

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.

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.

On ingestion:
Rinse mouth and then drink 200-300 ml of water.

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: Symptomatic treatment (decontamination, vital functions).

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

Do not breathe gas/vapour. The product is combustible. Burning produces harmful and toxic fumes.

Shut off or stop released substance/product under safe conditions. Cool endangered containers with water-spray. Due to the organic compound content of the preparation, fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

Do not release chemically contaminated water into drains, soil or surface water. Sufficient measures must be taken to retain the water used for extinguishing. Dispose of contaminated water and soil according to local regulations.

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. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:
Electrical devices must meet the specified temperature class.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Store protected against freezing.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

131-11-3: Dimethyl phthalate

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 also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 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
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	almost odourless	
Odour threshold:	not determined	
pH value:	not applicable, of very low solubility	
Freezing point:	0,36 °C	(other)
Boiling point:	283,1 °C (1.013 hPa)	(other)
Flash point:	154 °C	(DIN 51758, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not flammable	(other)

Lower explosion limit:	1,2 %(V) (144 °C) The lower explosion point of the substance/mixture has been determined. The explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the lower explosion limit.	(air)
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	470 °C	(DIN 51794)
Vapour pressure:	0,0013 hPa (20 °C) dynamic	(measured)
Density:	1,1917 g/cm3 (20 °C) Literature data.	(pyknometer)
Relative density:	1,1917 (20 °C) Literature data.	(pyknometer)
Relative vapour density (air):	6,69 (20 °C) Heavier than air.	(calculated)
Solubility in water:	4,0 g/l (25 °C)	(other)
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	1,54 (25 °C)	(OECD Guideline 107)
Self ignition:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature. (Method: other)
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	17,2 mPa.s (25 °C) Literature data.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	(other)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	(other)
SADT:	Study scientifically not justified. Not a substance/mixture liable to self-decomposition according to GHS.	

Other information

pKA:	The substance does not dissociate.	
Adsorption/water - soil:	KOC: 31,59; log KOC: 1,5	(calculated)

Surface tension:		(other)
	Based on chemical structure, surface activity is not to be expected.	
Grain size distribution:	Test substance	The substance / product is marketed or used in a non solid or granular form.
Molar mass:	194,19 g/mol	

10. Stability and Reactivity

Reactivity

Corrosion to metals:	No corrosive effect on metal.	
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
Reacts with strong oxidizing agents.

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. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Experimental/calculated data:
LD50 rat (oral): 8.200 mg/kg
Literature data.

LC0 rat (by inhalation): > 10,4 mg/l 6 h (IRT)
No mortality within the stated exposition time as shown in animal studies. Literature data. The vapour was tested.

LD50 rabbit (dermal): > 12.000 mg/kg (similar to OECD guideline 402)
Literature data.

Irritation

Assessment of irritating effects:
Not irritating to eyes and skin.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (Draize test)
Literature data.

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)
Literature data.

Respiratory/Skin sensitization

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

Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)
Literature data. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Germ cell mutagenicity

Assessment of mutagenicity:
In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays. The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Assessment of carcinogenicity:
The substance did not show tumor-promoting activity in rodents after pretreatment with a carcinogenic substance. The substance showed no carcinogenic acitivity in animals after chronic administration to the skin.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Developmental toxicity

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

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 oral exposure in animal studies. Repeated dermal uptake of the substance did not cause substance-related effects. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to 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:
No data available.

Aquatic invertebrates:
No data available.

Aquatic plants:
EC10 (72 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge:
EC20 (0,5 h) approx. 400 mg/l, activated sludge, domestic (DIN EN ISO 8192-OECD 209-88/302/EEC,P. C, aquatic)
The details of the toxic effect relate to the nominal concentration.

Chronic toxicity to fish:
No observed effect concentration (102 d) 11 mg/l, Oncorhynchus mykiss (OPP 72-4 (EPA-Guideline), Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to aquatic invertebrates:
EC10 (21 d) > 10 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

Assessment of terrestrial toxicity:
No toxic effects have been observed in studies with soil living organisms.

Soil living organisms:
No observed effect concentration (56 d) 47.200 mg/kg, Eisenia foetida (other)
The details of the toxic effect relate to the nominal concentration.

LC50 (14 d) 3.160 mg/kg, Eisenia foetida (other, artificial soil)
The details of the toxic effect relate to the nominal concentration.

Terrestrial plants:
No data available.

Other terrestrial non-mammals:
No data available.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Elimination information:
91 % DOC reduction (11 d) (Directive 84/449/EEC, C.3) (aerobic, municipal sewage treatment plant effluent)

Assessment of stability in water:
No data available.
Information on Stability in Water (Hydrolysis):
No data available.

Bioaccumulative potential

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

Bioaccumulation potential:
Bioconcentration factor: 57 (21 d), Lepomis macrochirus (measured)

Mobility in soil

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

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

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

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport
ADN

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
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:
Aquatic Acute Hazardous to the aquatic environment - acute

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.

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