We create chemistry

Safety data sheet

1. Identification

Product identifier

PALATINOL® N
Chemical name: Di-isononylphthalate
CAS Number: 28553-12-0

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
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

No need for classification according to GHS criteria for this product.

Label elements

Globally Harmonized System (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

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

Di-''isononyl'' phthalate
CAS Number: 28553-12-0
EC-Number: 249-079-5

Hazardous ingredients (GHS)
According to UN GHS criteria

No particular hazards known.

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

The product is combustible. 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:
No special precautions necessary. Substance/product is non-flammable.

Conditions for safe storage, including any incompatibilities

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

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

28553-12-0: Di-"isononyl" 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

9.1. Information on basic physical and chemical properties

State of matter:	liquid	
Form:	liquid	
Colour:	colourless	
Odour:	almost odourless	
Odour threshold:	not determined	
pour point:	-54 °C	(DIN ISO 3016)
Boiling point:	252,4 °C (7 hPa)	
Flammability:	hardly combustible	(derived from flash point)

Lower explosion limit:		(DIN EN 15794, air)
	(174,6 °C, approx. 1013 hPa) 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., As a consequence of the thermal decomposition behaviour (see Thermal decomposition) the determination of the lower explosion point according to standard DIN EN 15794 does not generate a globally meaningful value.	
Upper explosion limit:		
	For liquids not relevant for classification and labelling.	
Flash point:	222 °C Literature data.	
Auto-ignition temperature:	375 °C	(DIN 51794)
Thermal decomposition:	When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.	
pH value:		
	not applicable, of very low solubility	
Viscosity, dynamic:	68 - 82 mPa.s (20 °C) The value was determined by calculation from the detected kinematic viscosity.	
Thixotropy:	not thixotropic	
Solubility in water:		(Directive 92/69/EEC, A.6)
	< 0,1 mg/l (25 °C)	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	9,27 (20 °C) Literature data.	
Vapour pressure:	0,00001 Pa (20 °C) Literature data.	
Relative density:	0,970 - 0,977 (20 °C)	
Density:	0,97 g/cm3 (21,4 °C) Literature data.	(DIN 51757)
Relative vapour density (air):	14,4 (20 °C) Heavier than air.	(calculated)

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.
Impact sensitivity:	not shock-sensitive Based on the chemical structure there is no shock-sensitivity.

Oxidizing properties

Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.

Pyrophoric properties

Self-ignition temperature:		Test type: Spontaneous self-ignition at room-temperature.
	Based on its structural properties the product is not classified as self-igniting.	

Substances and mixtures, which emit flammable gases in contact with water

Formation of flammable gases:	Forms no flammable gases in the presence of water.

Corrosion to metals

No corrosive effect on metal.

Other safety characteristics

pKA:	The substance does not dissociate., Study scientifically not justified.	
Adsorption/water - soil:	KOC: 947900; log KOC: 6	(calculated)
Surface tension:	Study scientifically not justified.	
Molar mass:	418,62 g/mol	
SAPT-Temperature:	Study scientifically not justified.	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

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

No hazardous reactions if stored and handled as prescribed/indicated.

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. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard. Virtually nontoxic after a single skin contact.

Experimental/calculated data:
LD50 rat (oral): > 10.000 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 4,4 mg/l 4 h (IRT)
An aerosol was tested.

LD50 rabbit (dermal): > 3.160 mg/kg

Irritation

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

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (Draize test)

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. (Guideline 92/69/EEC, B.6)

Germ cell mutagenicity

Assessment of mutagenicity:
No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity

Assessment of carcinogenicity:
In long-term studies in rodents exposed to high doses, a tumorigenic effect was found; however, these results are thought to be due to a rodent-specific liver effect that is not relevant to humans.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

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:
Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man. Effects on the kidney of male rats were detected after repeated exposure. These effects are specific for the male rat and are known to be of no relevance to humans.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
No toxic effects occur within the range of solubility. There is a high probability that the product is not acutely 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:
LC50 (96 h) > 102 mg/l, Brachydanio rerio (Directive 92/69/EEC, C.1, semistatic)
The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates:
EC50 (48 h) > 74 mg/l, Daphnia magna (Directive 92/69/EEC, C.2, static)
The statement of the toxic effect relates to the analytically determined concentration.

No observed effect concentration (10 d) 2680 mg/kg, Chironomus tentans (static)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants:
EC50 (72 h) > 88 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)
The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:
EC0 (30 min) 83,9 mg/l, activated sludge, domestic (OECD Guideline 209, aquatic)
The statement of the toxic effect relates to the analytically determined concentration.
Analogous: Assessment derived from products with similar chemical character.

Chronic toxicity to fish:
No observed effect concentration (284 d) 0,0185-0,0245 mg/g feed, Oryzias latipes (OECD Guideline 210, Flow through.)
Analogous: Assessment derived from products with similar chemical character.

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d) > 101 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)
The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity:
No effects at the highest test concentration.

Soil living organisms:
LC50 (14 d) > 7.372 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)
Analogous: Assessment derived from products with similar chemical character.

No observed effect concentration (56 d) > 982,4 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)
Analogous: Assessment derived from products with similar chemical character.

Terrestrial plants:

No observed effect concentration (22 d) 1.000 mg/kg, Lactuca sativa (OECD Guideline 208)

Other terrestrial non-mammals:
No data available.

Persistence and degradability

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

Elimination information:
81 % CO2 formation relative to the theoretical value (28 d) (Directive 84/449/EEC, C.5) (aerobic, activated sludge, domestic, non-adapted)

Assessment of stability in water:
In contact with water the substance will hydrolyse slowly.
Information on Stability in Water (Hydrolysis):
$t_{1/2}$ 3,43 a (25 °C, pH value 7), (calculated, pH 7)

$t_{1/2}$ 125,19 d (25 °C, pH value 8), (calculated, other)

Bioaccumulative potential

Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Bioaccumulation potential:
Bioconcentration factor: < 3 (14 d), Oncorhynchus mykiss (measured)
Analogous: Assessment derived from products with similar chemical character.

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 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

Other ecotoxicological advice:
Do not release untreated into natural waters. According to the criteria of Guidelines 67/548/EEC and 1999/45/EC the product is not to classsify as environmental hazard.

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 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

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

Regulation:	IBC-Code
Product name:	Dialkyl (C9-C10) phthalates
Pollution category:	Y
Ship Type:	2

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

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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