ANDEROL 3046

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

1.1 Product identifier

Trade name : ANDEROL 3046

Product code : 000000000062597715

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

Use of the Substance/Mixture : Lubricant

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : LANXESS Deutschland GmbH
Production, Technology
Safety & Environment
51369 Leverkusen, Germany

Responsible Department : +49 221 8885 2288
infosds@lanxess.com

1.4 Emergency telephone number

Emergency telephone number : For 24/7 multilingual emergency please call CHEMTREC EMEA: +44 20 3885 0382 and mention CCN 1001748.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.
Endocrine disruptor for environment, Category 1	EUH430: May cause endocrine disruption in the environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Signal word	:	Danger	
Hazard statements	:	H412	Harmful to aquatic life with long lasting effects.
		EUH430	May cause endocrine disruption in the environment.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl	Not Assigned 700-990-0 01-2119519251-50	Aquatic Acute 1; H400 Aquatic Chronic 2;	>= 1 - < 2,5

phosphate and triphenyl phosphate [TPP>25%]		H411 ED ENV 1; EUH430 M-Factor (Acute aquatic toxicity): 1	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1 270-128-1 01-2119491299-23	Repr. 2; H361f	>= 0,1 - < 1
Substances with a workplace exposure limit :			
Dec-1-ene, oligomers, hydrogenated	68037-01-4 500-183-1 01-2119486452-34		>= 50 - < 70
1-Decene, homopolymer, hydrogenated (≥PAO10)	68037-01-4 500-183-1		>= 1 - < 10
Additional information on regulatory relevant constituents. No classification information is provided for these constituents :			
triphenyl phosphate	115-86-6 204-112-2 01-2119457432-41		>= 0,1 - < 1

For explanation of abbreviations see section 16.
Disclaimer: EC numbers starting with 1, 6, 7, 8, 9, or a letter in this document are ECHA List Numbers used for internal reference and do not carry legal significance as typical EC Numbers in Safety Data Sheets.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

No action shall be taken involving any personal risk or without suitable training.

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.

Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Get medical attention if symptoms appear.

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : For specialist advice physicians should contact the Poisons Information Service.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Alcohol-resistant foam
Carbon dioxide (CO2)
Dry powder
Sand
Water mist

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Burning produces noxious and toxic fumes.

Hazardous combustion products : Carbon dioxide (CO2)
Carbon monoxide
Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510) : 10, Combustible liquids

Further information on storage stability : Stable under recommended storage conditions.

7.3 Specific end use(s)

Specific use(s) : Raw material for industry

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Dec-1-ene, oligomers, hydrogenated	68037-01-4	AGW (Alveolate fraction)	5 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4; II			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK (measured as the alveolate fraction)	5 mg/m3	DE DFG MAK
	Peak-limit: excursion factor (category): 4; II			
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
1-Decene, homopolymer, hydrogenated (≥PAO10)	68037-01-4	AGW (Alveolate fraction)	5 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4; II			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK (measured as the alveolate fraction)	5 mg/m3	DE DFG MAK
	Peak-limit: excursion factor (category): 4; II			
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	Workers	Inhalation	Long-term systemic effects	49,3 mg/m3
	Workers	dermal	Long-term systemic effects	14 mg/kg bw/day
	General exposures	Inhalation	Long-term systemic effects	7,4 mg/m3
	General exposures	dermal	Long-term systemic effects	5 mg/kg bw/day

	General exposures	oral	Long-term systemic effects	5 mg/kg bw/day
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]	Workers	Skin contact	Long-term systemic effects	10,75 mg/kg
	Workers	Inhalation	Long-term systemic effects	7,58 mg/m3
	General exposures	Skin contact	Long-term systemic effects	5,375 mg/kg
	General exposures	Inhalation	Long-term systemic effects	1,87 mg/m3
	General exposures	Ingestion	Long-term systemic effects	5,375 mg/kg
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Workers	Inhalation	Long-term exposure, Systemic effects	4,37 mg/m3
	Workers	Dermal	Long-term exposure, Systemic effects	0,62 mg/kg
	Consumers	Inhalation	Long-term exposure, Systemic effects	1,09 mg/m3
	Consumers	Dermal	Long-term exposure, Systemic effects	0,31 mg/kg
	Consumers	Oral	Long-term exposure, Systemic effects	0,31 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]	Fresh water	0,004 mg/l
	Marine water	0,000399 mg/l
	Fresh water sediment	3,12 mg/kg dry weight (d.w.)
	Marine sediment	0,312 mg/kg dry weight (d.w.)
	Soil	0,246 mg/kg
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Fresh water	0,051 mg/l
	Marine water	0,0051 mg/l
	Secondary Poisoning	0,51 mg/l
	Fresh water sediment	9320 mg/kg
	Marine sediment	932 mg/kg

	Soil	1860 mg/kg
	Sewage treatment plant	1 mg/l

8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Safety glasses with side-shields conforming to EN166

Hand protection
Material : Polyvinyl alcohol or nitrile- butyl-rubber gloves
Break through time : 8 h
Wearing time : < 60 min

Remarks : Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Before removing gloves clean them with soap and water. Request information on glove permeation properties from the glove supplier.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Skin and body protection : Wear suitable protective clothing.
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
In the case of vapour formation use a respirator with an approved filter.

Respirator with combination filter for vapour/particulate (EN 141)

Filter type : Combined particulates, inorganic gas/vapour and organic vapour type (AB-P)

Protective measures : Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.
These recommendations apply to the product as supplied.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Physical state	:	liquid
Colour	:	yellow
Odour	:	No data available
Odour Threshold	:	No data available
Pour point	:	-48 °C
Boiling point/boiling range	:	No data available
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	254 °C Method: ASTM D 92, open cup
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	No data available

Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	42 mm2/s (40 °C) Method: ASTM D 445 7,1 mm2/s (100 °C) Method: ASTM D 445
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Density	:	0,861 g/cm3 (15 °C) Method: ASTM D 1298
Relative vapour density	:	No data available
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	No data available
Oxidizing properties	:	No data available
Self-ignition	:	No data available
Self-heating substances	:	No data available

Evaporation rate	:	No data available
Miscibility with water	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Conditions to avoid	:	Contamination Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male): > 0,4 mg/l Exposure time: 6 h Test atmosphere: vapour GLP: Yes Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: No

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: No
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Species : Rabbit
Result : No skin irritation

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Mild skin irritation
GLP : No

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Species : Rabbit
Result : No eye irritation

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species : Rabbit

Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	No

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Exposure routes	:	Skin contact
Species	:	Human
Result	:	Not a skin sensitizer.
GLP	:	Yes

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	Yes

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro

Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Genotoxicity in vitro : Test Type: Micronucleus test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative

GLP: No
Remarks: Test results on an analogous substance/product.

Carcinogenicity

Not classified due to lack of data.

Reproductive toxicity

Not classified due to lack of data.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: 50 - 250 - 1000 milligram per kilogram
General Toxicity - Parent: NOAEL: 1.000 mg/kg body weight
Method: OECD Test Guideline 421
GLP: Yes

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 25-75-225 milligram per kilogram
General Toxicity - Parent: NOAEL: 25 mg/kg bw/day
Fertility: NOEL: 225 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: Yes

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit, female
Application Route: Oral
Dose: 10-30-100 milligram per kilogram
General Toxicity Maternal: NOAEL: 30 mg/kg bw/day
Teratogenicity: NOAEL: 100 mg/kg bw/day
Developmental Toxicity: NOEL: 30 mg/kg bw/day
Method: OECD Test Guideline 414
Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses
GLP: Yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

Not classified due to lack of data.

STOT - repeated exposure

Not classified due to lack of data.

Repeated dose toxicity

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Species	:	Rat, male and female
NOAEL	:	1600 ppm
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	Continuous
Dose	:	100 - 400 - 1600 ppm
Method	:	OECD Test Guideline 408
Remarks	:	Subchronic toxicity

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rat, male and female
NOAEL	:	25 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	25-75-225 mg/kg bw/d
Method	:	OECD Test Guideline 422
GLP	:	Yes
Remarks	:	Subacute toxicity

Aspiration hazard

Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Not classified due to lack of data.

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks	:	The product itself has not been tested.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Toxicity to fish : LC50 (Ictalurus punctatus (channel catfish)): 0,8 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: No
GLP: No
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,202 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: Yes
Remarks: Fresh water

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (algae)): > 1,7 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: Yes
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,16 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: Yes
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: 0,093 mg/l
Exposure time: 90 d
Species: Pimephales promelas (fathead minnow)
Analytical monitoring: Yes
Method: OECD Test Guideline 215

GLP: No
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,0399 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: Yes
GLP: No
Remarks: Fresh water

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 203
GLP: No
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 202
GLP: Yes
Remarks: Fresh water
nominal concentration

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: No
Method: OECD Test Guideline 201
GLP: No
Remarks: Fresh water
nominal concentration

NOEC (Desmodesmus subspicatus (green algae)): > 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: No
Method: OECD Test Guideline 201
GLP: No
Remarks: Fresh water
nominal concentration

Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l End point: Respiration inhibition Exposure time: 3 h Test Type: static test Analytical monitoring: No Method: OECD Test Guideline 209 GLP: No Remarks: Fresh water nominal concentration
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EL10: 1,69 mg/l End point: Reproduction Exposure time: 21 Days Species: Daphnia magna (Water flea) Test Type: semi-static test Analytical monitoring: No Method: OECD Test Guideline 211 GLP: Yes Remarks: Fresh water nominal concentration water extractable fraction

1-Decene, homopolymer, hydrogenated (≥PAO10):

Toxicity to fish	:	LC50 (Fish): > 1.000 mg/l Exposure time: 96 h

12.2 Persistence and degradability

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 61 % Exposure time: 28 d Method: OECD Test Guideline 301D

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Biodegradability	:	Test Type: aerobic Inoculum: activated sludge, non-adapted Concentration: 20,1 mg/l Result: Not readily biodegradable. Biodegradation: 1 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: Yes

1-Decene, homopolymer, hydrogenated (≥PAO10):

Biodegradability	:	Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1.850
Partition coefficient: n-octanol/water	:	log Pow: 4,68 (25 °C) Method: OECD Test Guideline 117

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Partition coefficient: n-octanol/water	:	log Pow: 6,66 (23 °C) pH: 6,67 Method: OECD Test Guideline 123 GLP: Yes Remarks: Based on data from similar materials

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment	:	This substance/mixture contains components considered to have endocrine disrupting properties for environment , according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Assessment	:	Known or presumed endocrine disruptors for the environment.
Remarks	:	Assessment is based on expert judgement.

12.7 Other adverse effects

Product:

Additional ecological infor-	:	An environmental hazard cannot be excluded in the event of

mation	unprofessional handling or disposal. Harmful to aquatic life with long lasting effects. The product itself has not been tested. Avoid release to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Hazard and Handling Notes : Not dangerous cargo.
Keep separated from foodstuffs.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Number on list 52: 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich Number on list 75: Do not use for tattooing purposes.
International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	triphenyl phosphate
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors.	:	Neither banned nor restricted
Council Regulation (EC) No 273/2004 on drug precursors	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water hazard class (Germany)	:	WGK 1 slightly hazardous to water Classification according to AwSV, Annex 1 (5)

Other regulations:

Leaflets of the German "Berufsgenossenschaft Rohstoffe und chemische Industrie (BG RCI)":
M 050 "Tätigkeiten mit Gefahrstoffen"
M 053 "Arbeitschutzmaßnahmen für den Umgang mit Gefahrstoffen"

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

EUH430	:	May cause endocrine disruption in the environment.
H361f	:	Suspected of damaging fertility.
H400	:	Very toxic to aquatic life.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
ED ENV	:	Endocrine disruptor for environment
Repr.	:	Reproductive toxicity
DE DFG MAK	:	Germany. MAK BAT Annex IIa
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
DE DFG MAK / MAK	:	MAK value
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Aquatic Chronic 3	H412	Based on product data or assessment
ED ENV 1	EUH430	Calculation method

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.