

2,4-DI-TERT.-AMYLPHENOL

Version: 10.01

Revision Date 01.03.2018

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	2,4-DI-TERT.-AMYLPHENOL
REACH No.	01-2120113739-53-0000
Substance name (REACH / CLP)	2,4-di-tert-Pentylphenol

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

Use	Industrial use
Uses advised against	raw material for synthesis processes in the chemical industry

1.3 Details of the supplier of the safety data sheet

Company	SASOL Germany GmbH Anckelmannsplatz 1 20537 Hamburg
	Telephone: +49 40 63684-1000 Telefax: +49 40 63684-3700
Information (Product safety):	Telephone: + 49 (0) 23 65 - 49 47 05 Telefax: + 49 (0) 23 65 - 49 92 40
E-mail address	msds-info.germany@de.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+ 49 (0) 23 65 - 49 22 32
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity Category 4 (Oral)	Harmful if swallowed.
Skin corrosion Category 1B	Causes severe skin burns and eye damage.
Chronic aquatic toxicity Category 2	Toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Hazard pictograms**

Signal word	Danger
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Hazard statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P501	Dispose of contents/ container to an approved waste disposal plant.

Additional Labelling:

EUH208 Contains: p-(1,1-Dimethylpropyl)phenol. May produce an allergic reaction.

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance in the meaning of regulation (EC) 1907/2006.

COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES

2,4-di-tert-Pentylphenol

EC-No.: 204-439-0	Index-No.:	component type: Active ingredient
REACH No.: 01-2120113739-53-0000		CAS-No.: 120-95-6
Substance name (REACH / CLP): 2,4-di-tert-Pentylphenol		
Classification (Regulation (EC) No 1272/2008):	Acute Tox. 4 (Oral)	H302
	Skin Corr. 1B	H314
	Aquatic Chronic	2 H411

p-(1,1-Dimethylpropyl)phenol

content: <= 0,5 %	component type: Impurity	
EC-No.: 201-280-9	Index-No.:	CAS-No.: 80-46-6
Classification (Regulation (EC) No 1272/2008):	Skin Corr. 1B	H314
	Eye Dam. 1	H318
	Skin Sens. 1B	H317
	Aquatic Chronic	1 H410

For information on ingredients listed on the candidate list (Candidate List of Substances of Very High Concern for Authorisation) or in the list of substances subject to authorization (Annex XIV of Regulation (EC) No 1907/2006), see section 15.1. of this data sheet.

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible).
If inhaled	Move to fresh air. Call a physician immediately.
In case of skin contact	Wash off immediately with plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Protect unharmed eye.
If swallowed	Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Rinse mouth. If swallowed, seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	Symptoms: No information available. Risks: No information available.
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4.3 Indication of any immediate medical attention and special treatment needed

Indication of any immediate medical attention and special treatment needed	Treatment: No information available.
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Water spray, Dry powder, Foam, Carbon dioxide (CO ₂)
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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Dangerous gases or fumes may occur in case of fire.
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5.3 Advice for firefighters

Special protective equipment for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment.
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6.2 Environmental precautions

Environmental precautions	Should not be released into the environment.
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6.3 Methods and materials for containment and cleaning up

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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

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling****Advice on safe handling**

Wear personal protective equipment.

Advice on protection against fire and explosion

Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage areas and containers**

Keep container tightly closed. Keep in a cool, well-ventilated place.

Storage class (TRGS 510)

8AS: Combustible solids, corrosive

7.3 Specific end use(s)**Specific use(s)**

This information is not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****National occupational exposure limits**

No data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

No data available

DERIVED NO EFFECT LEVEL (DNEL)**Substance name: 2,4-di-tert-Pentylphenol**

No data available

PREDICTED NO EFFECT CONCENTRATION (PNEC)**Substance name: 2,4-di-tert-Pentylphenol**

No data available

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8.2 Exposure controls

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a combined filter (e.g. A-P2 or ABEK-P2), in compliance with EN 141.
Hand protection	<p>The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).</p> <p>gloves suitable for permanent contact: Material: Fluorinated rubber Break through time: >= 480 min Layer thickness: 0,4 mm</p> <p>Material: butyl-rubber Break through time: >= 480 min Layer thickness: 0,5 mm</p>
Eye protection	Tightly fitting safety goggles
Skin and body protection	Protective suit, Safety shoes
Hygiene measures	Take off all contaminated clothing immediately. Handle in accordance with good industrial hygiene and safety practice.
Protective measures	Wear suitable gloves and eye/face protection. Avoid contact with the skin and the eyes.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	Should not be released into the environment.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	solid; 20 °C; 1.013 hPa
Form	solid
Colour	colourless
Odour	phenol-like
Odour Threshold	No valid method available

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pH	Not applicable
Melting point/range	ca. 26 °C; DIN ISO 3841
Boiling point/boiling range	ca. 145 °C; 10 hPa
Flash point	ca. 151 °C; DIN 51758
Evaporation rate	Not relevant / not applicable Justification: Solid
Flammability (solid, gas)	No data available
Lower explosion limit	Not relevant / not applicable Justification: Solid
Upper explosion limit	Not relevant / not applicable Justification: Solid
Vapour pressure	< 0,01 hPa; 20 °C
Relative vapour density	Not relevant / not applicable, Justification: Solid
Density	ca.0,91 g/cm ³ ; 50 °C
Relative density	No data available
Water solubility	0,015 g/l; 20 °C
Partition coefficient: n-octanol/water	No data available
Ignition temperature	ca. 260 °C; DIN 51794
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	17,9 mPas; 50 °C
Explosive properties	Constituents do not contain chemical groups associated with explosivity.
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity**Note** No dangerous reaction known under conditions of normal use.**10.2 Chemical stability****Note** No decomposition if stored and applied as directed.**10.3 Possibility of hazardous reactions****Hazardous reactions** No dangerous reaction known under conditions of normal use.**10.4 Conditions to avoid****Conditions to avoid** Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.**10.5 Incompatible materials to avoid****Materials to avoid** Oxidizing agents;

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10.6 Hazardous decomposition products

Hazardous decomposition products	Stable under normal conditions.
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SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity**

Acute oral toxicity	2,4-di-tert-Pentylphenol: LD50 Rat: > 300 - 2.000 mg/kg; OECD Test Guideline 401 Harmful if swallowed.
Acute inhalation toxicity	2,4-di-tert-Pentylphenol: No data available
Acute dermal toxicity	2,4-di-tert-Pentylphenol: LD50 Rat: > 2.000 mg/kg; The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2,6-di-tert-butylphenol Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Skin irritation	2,4-di-tert-Pentylphenol: Rabbit: Corrosive; OECD Test Guideline 404 Causes severe skin burns and eye damage.
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Serious eye damage/eye irritation

Eye irritation	2,4-di-tert-Pentylphenol: study scientifically unjustified corrosive effects
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Respiratory or skin sensitisation

Sensitisation	2,4-di-tert-Pentylphenol: Buehler Test Guinea pig: not sensitizing; OECD Test Guideline 406 Based on available data, the classification criteria are not met.
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Germ cell mutagenicity

Genotoxicity in vitro	2,4-di-tert-Pentylphenol: No data available
Genotoxicity in vivo	2,4-di-tert-Pentylphenol: No data available

Carcinogenicity

Carcinogenicity	2,4-di-tert-Pentylphenol: This information is not available.
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Reproductive toxicity

Reproductive toxicity	2,4-di-tert-Pentylphenol: This information is not available.
Teratogenicity	2,4-di-tert-Pentylphenol: This information is not available.

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STOT - single exposure

Remarks 2,4-di-tert-Pentylphenol:
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Remarks 2,4-di-tert-Pentylphenol:
This information is not available.

Aspiration hazard

Aspiration toxicity 2,4-di-tert-Pentylphenol:
Not applicable

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish 2,4-di-tert-Pentylphenol:
No data available

Toxicity to fish - Chronic toxicity 2,4-di-tert-Pentylphenol:
No data available

Toxicity to daphnia and other aquatic invertebrates 2,4-di-tert-Pentylphenol:
EC50 (48 h) Daphnia magna (Water flea): > 1 - 10 mg/l ; static test; OECD Test Guideline 202

Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity 2,4-di-tert-Pentylphenol:
No data available

Toxicity to aquatic plants 2,4-di-tert-Pentylphenol:
No data available

Toxicity to bacteria 2,4-di-tert-Pentylphenol:
No data available

Toxicity to soil dwelling organisms 2,4-di-tert-Pentylphenol:
No data available

Toxicity to terrestrial flora 2,4-di-tert-Pentylphenol:
No data available

Toxicity for other terrestrial non-mammalian fauna 2,4-di-tert-Pentylphenol:
No data available

12.2 Persistence and degradability

Biodegradability 2,4-di-tert-Pentylphenol:
Not readily biodegradable.; < 60 %; aerobic; OECD Test Guideline 301C (literature value)

12.3 Bioaccumulative potential

Bioaccumulation 2,4-di-tert-Pentylphenol:
No data available

12.4 Mobility in soil

Mobility 2,4-di-tert-Pentylphenol:

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No data available

12.5 Results of PBT and vPvB assessment

Results of PBT assessment 2,4-di-tert-Pentylphenol:
No data available

12.6 Other adverse effects

General advice 2,4-di-tert-Pentylphenol:
Toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

waste code of the European Union: EWC A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. The waste code must be determined in agreement with the regional waste disposal authority or company.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR	2430
RID	2430
ADN	2430
IMDG	2430
ICAO/IATA	2430

14.2 Proper shipping name

ADR	ALKYLPHENOLS, SOLID, N.O.S.
RID	ALKYLPHENOLS, SOLID, N.O.S.
ADN	ALKYLPHENOLS, SOLID, N.O.S.
IMDG	ALKYLPHENOLS, SOLID, N.O.S.
ICAO/IATA	ALKYLPHENOLS, SOLID, N.O.S.

14.3 Transport hazard class

ADR	8
RID	8
ADN	8
IMDG	8
ICAO/IATA	8

14.4 Packing group

ADR	II
RID	II
ADN	II
IMDG	II

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ICAO/IATA II

14.5 Environmental hazards

ADR	Environmentally hazardous	yes
RID	Environmentally hazardous	yes
ADN	Environmentally hazardous	yes
IMDG	Marine pollutant	yes
ICAO/IATA	Environmentally hazardous	yes

14.6 Special precautions for user

ADR	Hazard Identification Number	80
	Labels	8
	Tunnel restriction code	(E)
IMDG	Labels 8	
	EmS Number 1 F-A	
	EmS Number 2 S-B	
ICAO/IATA	Labels	8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No information available.

SECTION 15: REGULATORY INFORMATION

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

EU REGULATIONS /INTERNATIONAL REGULATIONS

EU SVHC: REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Listed

The product contains following substances that are listed on the named regulation/list:

Substance name	CAS-No. EC-No.	content
p-(1,1-Dimethylpropyl)phenol	80-46-6 201-280-9	<= 0,5 %

Occupational restrictions Employment restrictions for children and young workers in accordance with Directive 94/33/EC and the respective national provisions are to be observed.

NATIONAL/OTHER REGULATIONS

Legislation on the control of major-accident hazards involving dangerous substances Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
list entry in the directive:: ENVIRONMENTAL HAZARDS; E2
Qualifying quantity 1: 200 t; Qualifying quantity 2: 500 t;

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NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	listed (product or constituents are listed)
US. Toxic Substances Control Act	TSCA	listed (product or constituents are listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	listed (product or constituents are listed)
Japan. Kashin-Hou Law List	ENCS (JP)	listed (product or constituents are listed)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	listed (product or constituents are listed)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	not listed (product or constituents are not listed)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	not listed (product or constituents are not listed)
China. Inventory of Existing Chemical Substances	INV (CN)	listed (product or constituents are listed)

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

15.2 Chemical safety assessment**2,4-di-tert-Pentylphenol**

A chemical safety assessment has not been carried out (substance registered as intermediate or production volume < 10 t/a).

SECTION 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Safety datasheet sections which have been updated:

2. Hazards identification

Further information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 a warranty or

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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.
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
AICS	Australian Inventory of Chemical Substances
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials (US)
BCF	Bioconcentration factor
CLP	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DIN	Deutsches Institut für Normung
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC...	Effect concentration ... %
ENCs	Existing Notified Chemical Substances (Japan)
EWC	European Waste Catalogue
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organization for Standardization
IUAPC	International Union of Pure and Applied Chemistry
KECI	Korea Existing Chemicals Inventory
LC...	Lethal Concentration, ...%
LD...	Lethal Dose, ...%
MARPOL	International Convention for the Prevention of Pollution From Ships
NDSL	Non-Domestic Substances List
NOAEL	no observable adverse effect level
NOEL/NOEC	No Observed-effect level/concentration
NZIoC	New Zealand Inventory of Chemicals
OECD	Organisation for Economic Co-operation and Development
PBT	persistent, bioaccumulative, toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
TG	Test Guideline
TRGS	Technische Regeln für Gefahrstoffe
TSCA	Toxic Substances Control Act
vPvB	very persistent, very bioaccumulative
WGK	Wassergefährdungsklasse