

NACOL 22 - 98

Version: 4.08

Revision Date 2017/11/07

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

Trade name	NACOL 22 - 98
INCI	Behenyl Alcohol
REACH No.	01-2119487963-20-0000
Substance name (REACH / CLP)	docosan-1-ol

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

Use	Industrial use raw material for cosmetic agents raw material for washing and cleaning agents raw material for textile auxiliary agents
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) 5 51 - 1 92 40 (GIZ-Nord Poisons Centre)
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

No hazards to be specially mentioned.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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

CHEMICAL CHARACTERIZATION**Docosan-1-ol****component type:** Active ingredient**EC-No.:** 211-546-6**Index-No.:****CAS-No.:** 661-19-8**REACH No.:** 01-2119487963-20-0000**Substance name (REACH / CLP):** docosan-1-ol**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**

No dangerous ingredients according to Regulation (EC) No. 1907/2006

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	No hazards which require special first aid measures.
If inhaled	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
In case of skin contact	Wash off with plenty of water.
In case of eye contact	Rinse with plenty of water.
If swallowed	Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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 (CO2)
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5.2 Special hazards arising from the substance or mixture

Specific hazards during	Dangerous gases or fumes may occur in case of fire.
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firefighting

5.3 Advice for firefighters

Special protective equipment for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information Standard procedure for chemical fires.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions Use personal protective equipment.

Special precautions Danger of slipping after spill or leakage.

6.2 Environmental precautions

Environmental precautions No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Sweep up or vacuum up spillage and collect in suitable container 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 protection against fire and explosion Normal measures for preventive fire protection.

Fire-fighting class B: Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers No special storage conditions required.

Storage class (TRGS 510) 11: Combustible Solids

Other data Stable under normal conditions.

7.3 Specific end use(s)

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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: docosan-1-ol			
End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects	125 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	220 mg/m ³	
	dermal, Acute/short-term exposure - local effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - local effects		Not relevant / not applicable
	dermal, long-term exposure - systemic effects	125 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	220 mg/m ³	
	dermal, long-term exposure - local effects		Not relevant / not applicable
	Inhalation, long-term exposure - local effects		Not relevant / not applicable
Consumers	dermal, Acute/short-term exposure - systemic effects	75 mg/kg	based on body weight and day
	Inhalation, Acute/short-term exposure - systemic effects	65 mg/m ³	
	Oral, Acute/short-term exposure - systemic effects	75 mg/kg	based on body weight and day
	dermal, Acute/short-term exposure - local effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - local effects		Not relevant / not applicable
	dermal, long-term exposure - systemic effects	75 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	65 mg/m ³	
	Oral, long-term exposure - systemic effects	75 mg/kg	based on body weight and day
dermal, long-term exposure - local effects		Not relevant / not applicable	
Inhalation, long-term exposure - local effects		Not relevant / not applicable	

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PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: docosan-1-ol		
Environmental Compartment	Value	Note
Fresh water	0.00156 mg/l	
Marine water	0.000156 mg/l	
intermittent release		Not relevant / not applicable
treatment plant	0.000036 mg/l	
Fresh water sediment	82 mg/kg	based on dry weight
Marine sediment	8.2 mg/kg	based on dry weight
Soil	66 mg/kg	based on dry weight
food		Not relevant / not applicable

8.2 Exposure controls

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where dust, fibres and smoke occur, use self-contained breathing apparatus or breathing apparatus with a type P2 or P3 filter, in compliance with EN 143.
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: Nitrile rubber/nitrile latex Break through time: >= 480 min Layer thickness: 0.35 mm</p> <p>Material: butyl-rubber Break through time: >= 480 min Layer thickness: 0.5 mm</p>
Eye protection	Safety glasses
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.
Protective measures	No special protective equipment required.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	No special environmental precautions required.
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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	characteristic
Odour Threshold	No data available
pH	Not applicable, Justification:, insoluble
Melting point/range	ca. 69 - 73 °C
Flash point	ca. 227 °C
Evaporation rate	Not relevant / not applicable Justification: Solid
Flammability (solid, gas)	not auto-flammable
Lower explosion limit	Not applicable Justification: Solid
Upper explosion limit	Not applicable Justification: Solid
Vapour pressure	< 1.000 hPa; 20 °C
Relative vapour density	Not relevant / not applicable, Justification: Solid
Density	ca.0.8 g/cm ³ ; 80 °C; DIN 51757
Water solubility	insoluble
Partition coefficient: n-octanol/water	log Pow: ca. 8.3; own test results/literature values
Ignition temperature	ca. 220 °C
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	ca. 7.5 mPas; 80 °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 Stable at normal ambient temperature and pressure.

10.2 Chemical stability

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Note	No decomposition if stored and applied as directed.
10.3 Possibility of hazardous reactions	
Hazardous reactions	Hazardous decomposition products formed under fire conditions.
10.4 Conditions to avoid	
Conditions to avoid	Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.
10.5 Incompatible materials to avoid	
10.6 Hazardous decomposition products	
Hazardous decomposition products	No decomposition if used as directed.
Thermal decomposition	No decomposition if used as directed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	LD50 Rat: > 5,000 mg/kg; OECD Test Guideline 401 Based on available data, the classification criteria are not met.
Acute inhalation toxicity	The study is not necessary. Justification: The LC50 is expected to be greater than the saturated vapour concentration based on weight of evidence across category.
Acute dermal toxicity	LD50 Rabbit: > 5,000 mg/kg; (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Icosan-1-ol Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Skin irritation	Rabbit: not irritating; OECD Test Guideline 404 (literature value) Based on available data, the classification criteria are not met.
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Serious eye damage/eye irritation

Eye irritation	Rabbit: not irritating; OECD Test Guideline 405 (literature value) Based on available data, the classification criteria are not met.
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Respiratory or skin sensitisation

Sensitisation	Maximisation 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	In vitro tests did not show mutagenic effects (literature value) Category approach
Genotoxicity in vivo	In vivo tests did not show mutagenic effects (literature value)

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Remarks	Category approach Based on available data, the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. Category approach
Reproductive toxicity	
Reproductive toxicity	Rat; Oral No toxicity to reproduction (literature value)
RemarksReproductive toxicity	Based on available data, the classification criteria are not met.
Teratogenicity	Rabbit; Oral Did not show teratogenic effects in animal experiments. (literature value)
Remarks-Teratogenicity	Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Rat; Oral; 182-day NOAEL: 1,000 mg/kg (based on body weight and day); OECD Test Guideline 408 (literature value)
Aspiration hazard	
Aspiration toxicity	Not applicable
Further information	
Toxicological information	Toxicokinetics The substance is poorly absorbed via skin. The substance is predicted to be bioavailable via the oral route. The substance is metabolised and excreted.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (96 h) Oncorhynchus mykiss (rainbow trout): > 100 mg/l ; semi-static test; OECD Test Guideline 203 In the range of water solubility not toxic under test conditions. (literature value)
Toxicity to fish - Chronic toxicity	The study is not necessary. Sufficient information is available to predict no toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates	(48 h) Daphnia magna (Water flea) ; calculated; QSAR (literature value) In the range of water solubility not toxic under test conditions.

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Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	The study is not necessary. Sufficient information is available to predict no toxicity at the limit of solubility.
Toxicity to aquatic plants	; calculated; In the range of water solubility not toxic under test conditions. Category approach
Toxicity to bacteria	The study is not necessary. Readily biodegradable. The substance is not to be considered to be inhibitory to bacteria.
Toxicity to soil dwelling organisms	The study is not necessary. Readily biodegradable. The substance does not pose a chronic hazard to soil organisms.
Toxicity to terrestrial flora	The study is not necessary. Readily biodegradable. The substance does not pose a chronic hazard to soil organisms.
Toxicity for other terrestrial non-mammalian fauna	The study is not necessary. Studies on birds do not need to be conducted due to large mammalian dataset.
12.2 Persistence and degradability	
Biodegradability	Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B (literature value)
12.3 Bioaccumulative potential	
Bioaccumulation	Bioaccumulation is unlikely.
12.4 Mobility in soil	
Mobility	Adsorption/Soil; Koc: 112000; calculated immobile strong adsorption to soil The substance and its relevant degradation products decompose rapidly.
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	Based on available data, the classification criteria are not met. This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
12.6 Other adverse effects	
General advice	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Can be incinerated, when in compliance with local regulations.
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

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ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.2 Proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.3 Transport hazard class

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.4 Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

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

NATIONAL/OTHER REGULATIONS

Legislation on the control of major-accident hazards involving dangerous	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
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substances list entry in the directive:: Not applicable**NOTIFICATION STATUS**

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)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	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)	listed (product or constituents are listed)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	listed (product or constituents are listed)
China. Inventory of Existing Chemical Substances	INV (CN)	listed (product or constituents are listed)
Switzerland. Consolidated Inventory	CH INV	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**docosan-1-ol**

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION**Safety datasheet sections which have been updated:**

- 11. Toxicological information
- 12. Ecological information
- 15. Regulatory information

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

Annex

Attachments to the safety data sheet and/or lists of the identified uses for the listed substances can be downloaded using the internet links below.

docosan-1-ol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/00000000109_EN_01.pdf