

**NACOL 22 - 98**

Version: 4.08

Revision Date 07.11.2017

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

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**1.1 Product identifier**

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

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

<b>Use</b>	Industrial use raw material for cosmetic agents raw material for washing and cleaning agents raw material for textile auxiliary agents
<b>Uses advised against</b>	raw material for synthesis processes in the chemical industry

**1.3 Details of the supplier of the safety data sheet**

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

**1.4 Emergency telephone number**

<b>Emergency telephone number</b>	+ 49 (0) 5 51 - 1 92 40 (GIZ-Nord Poisons Centre)
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**SECTION 2: HAZARDS IDENTIFICATION**

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**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**

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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

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**SECTION 4: FIRST AID MEASURES**

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**4.1 Description of first aid measures**

<b>General advice</b>	No hazards which require special first aid measures.
<b>If inhaled</b>	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
<b>In case of skin contact</b>	Wash off with plenty of water.
<b>In case of eye contact</b>	Rinse with plenty of water.
<b>If swallowed</b>	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**

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

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

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**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	Water spray, Dry powder, Foam, Carbon dioxide (CO2)
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**5.2 Special hazards arising from the substance or mixture**

<b>Specific hazards during</b>	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 <sup>3</sup>	
	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 <sup>3</sup>	
	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 <sup>3</sup>	
	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 <sup>3</sup>	
	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

<b>Respiratory protection</b>	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.
<b>Hand protection</b>	<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><b>gloves suitable for permanent contact:</b>  Material: Nitrile rubber/nitrile latex  Break through time: &gt;= 480 min  Layer thickness: 0,35 mm</p> <p>Material: butyl-rubber  Break through time: &gt;= 480 min  Layer thickness: 0,5 mm</p>
<b>Eye protection</b>	Safety glasses
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Protective measures</b>	No special protective equipment required.

#### ENVIRONMENTAL EXPOSURE CONTROLS

<b>General advice</b>	No special environmental precautions required.
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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

<b>Physical state</b>	solid; 20 °C; 1.013 hPa
<b>Form</b>	solid
<b>Colour</b>	colourless
<b>Odour</b>	characteristic
<b>Odour Threshold</b>	No data available
<b>pH</b>	Not applicable, Justification:, insoluble
<b>Melting point/range</b>	ca. 69 - 73 °C
<b>Flash point</b>	ca. 227 °C
<b>Evaporation rate</b>	Not relevant / not applicable Justification: Solid
<b>Flammability (solid, gas)</b>	not auto-flammable
<b>Lower explosion limit</b>	Not applicable Justification: Solid
<b>Upper explosion limit</b>	Not applicable Justification: Solid
<b>Vapour pressure</b>	< 1,000 hPa; 20 °C
<b>Relative vapour density</b>	Not relevant / not applicable, Justification: Solid
<b>Density</b>	ca.0,8 g/cm <sup>3</sup> ; 80 °C; DIN 51757
<b>Water solubility</b>	insoluble
<b>Partition coefficient: n-octanol/water</b>	log Pow: ca. 8,3; own test results/literature values
<b>Ignition temperature</b>	ca. 220 °C
<b>Auto-ignition temperature</b>	not auto-flammable
<b>Viscosity, dynamic</b>	ca. 7,5 mPas; 80 °C
<b>Explosive properties</b>	Constituents do not contain chemical groups associated with explosivity.
<b>Oxidizing properties</b>	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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<b>Note</b>	No decomposition if stored and applied as directed.
<b>10.3 Possibility of hazardous reactions</b>	
<b>Hazardous reactions</b>	Hazardous decomposition products formed under fire conditions.
<b>10.4 Conditions to avoid</b>	
<b>Conditions to avoid</b>	Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.
<b>10.5 Incompatible materials to avoid</b>	
<b>10.6 Hazardous decomposition products</b>	
<b>Hazardous decomposition products</b>	No decomposition if used as directed.
<b>Thermal decomposition</b>	No decomposition if used as directed.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

<b>Acute oral toxicity</b>	LD50 Rat: > 5.000 mg/kg; OECD Test Guideline 401 Based on available data, the classification criteria are not met.
<b>Acute inhalation toxicity</b>	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.
<b>Acute dermal toxicity</b>	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

<b>Skin irritation</b>	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

<b>Eye irritation</b>	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

<b>Sensitisation</b>	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

<b>Genotoxicity in vitro</b>	In vitro tests did not show mutagenic effects (literature value) Category approach
<b>Genotoxicity in vivo</b>	In vivo tests did not show mutagenic effects (literature value)

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<b>Remarks</b>	Category approach Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	
<b>Carcinogenicity</b>	The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. Category approach
<b>Reproductive toxicity</b>	
<b>Reproductive toxicity</b>	Rat; Oral No toxicity to reproduction (literature value)
<b>RemarksReproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Teratogenicity</b>	Rabbit; Oral Did not show teratogenic effects in animal experiments. (literature value)
<b>Remarks-Teratogenicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	
<b>Remarks</b>	The substance or mixture is not classified as specific target organ toxicant, single exposure.
<b>STOT - repeated exposure</b>	
<b>Remarks</b>	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
<b>Repeated dose toxicity</b>	Rat; Oral; 182-day NOAEL: 1.000 mg/kg (based on body weight and day); OECD Test Guideline 408 (literature value)
<b>Aspiration hazard</b>	
<b>Aspiration toxicity</b>	Not applicable
<b>Further information</b>	
<b>Toxicological information</b>	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

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

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Product</b>	Can be incinerated, when in compliance with local regulations.
<b>waste code of the European Union: EWC</b>	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/000000000109\\_EN\\_01.pdf](http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000000109_EN_01.pdf)