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

1.1 Product identifier

Trade name NACOL 10 - 98

REACH No. 01-2119480407-35-XXXX

Substance name (REACH / CLP) decan-1-ol

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

Use Industrial use

raw material for washing and cleaning agents

raw material for synthesis processes in the chemical industry

Uses advised against

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)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation Category 2 Causes serious eye irritation.

Long-term (chronic) aquatic hazard Category 3 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word Warning



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Hazard statements

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P264 Wash face, hands and any exposed skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved incineration plant.

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

Decan-1-ol

component type: Active ingredient

EC-No.: 203-956-9 **Index-No.**: **CAS-No.**: 112-30-1

REACH No.: 01-2119480407-35-XXXX

Substance name (REACH / CLP): decan-1-ol

Classification (Regulation Eye Irrit. 2 H319

(EC) No 1272/2008): Aquatic Chronic 3 H412

Dodecan-1-ol

content: <= 0.5 % component type: Impurity

EC-No.: 203-982-0 **Index-No.**: **CAS-No.**: 112-53-8

Classification (Regulation Eye Irrit. 2 H319

(EC) No 1272/2008): Aquatic Acute 1 H400 Aquatic Chronic 2 H411

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice If you feel unwell, seek medical advice (show the label where possible). Take off all

contaminated clothing immediately.



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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 thoroughly with plenty of water for at least 15 minutes and consult a

physician.

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.

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.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Water spray, Dry powder, Foam, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

Dangerous gases or fumes may occur in case of fire.

5.3 Advice for firefighters

Special protective equipment

for firefighters

Use personal protective equipment. Wear self-contained breathing apparatus for

firefighting if necessary.

Further information Prevent fire extinguishing water from contaminating surface water or the ground

water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions Avoid subsoil penetration.

Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials 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).

6.4 Reference to other sections



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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

No special protective measures against fire required.

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) 10-13: German Storage Class 10 to 13

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: decan-1-ol				
End Use	Exposure routes	Value	Note	
Workers	dermal, Acute/short-term exposure - systemic effects		Not relevant / not applicable	
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant / not applicable	
	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	250 mg/kg	based on body weight and day	
	Inhalation, long-term exposure - systemic effects	176 mg/m3		



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	dermal, long-term exposure - local effects	0.19 mg/cm2	
	Inhalation, long-term exposure - local effects	129 mg/m3	
Consumers	dermal, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	Oral, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	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	43.5 mg/m3	
	Oral, long-term exposure - systemic effects	12.5 mg/kg	based on body weight and day
	dermal, long-term exposure - local effects	0.067 mg/cm2	
	Inhalation, long-term exposure - local effects		Not relevant / not applicable

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: decan-1-ol			
Environmental Compartment	Value	Note	
Fresh water	0.042 mg/l		
Marine water	0.0042 mg/l		
intermittent release	0.08 mg/l		
treatment plant	1.5 mg/l		
Fresh water sediment	7 mg/kg	based on dry weight	
Marine sediment	0.7 mg/kg	based on dry weight	
Soil	1.27 mg/kg	based on dry weight	
Air		Not relevant / not applicable	
food		Not relevant / not applicable	

8.2 Exposure controls

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	No persona	l respiratory	protective equipment	normally	/ required.	In inadequately
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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 type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

Hand protection 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



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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).

gloves suitable for permanent contact:

Material: Nitrile rubber/nitrile latex Break through time: >= 480 min Layer thickness: 0.35 mm

Material: butyl-rubber

Break through time: >= 480 min Layer thickness: 0.5 mm

gloves suitable for splash protection:

Material: Natural rubber/natural latex Break through time: >= 60 min Layer thickness: 0.5 mm

Eye protection Tightly fitting safety goggles

Skin and body protection Wear suitable protective equipment.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. Keep away

from food, drink and animal feedingstuffs.

Protective measures Avoid contact with eyes. Wear suitable gloves and eye/face protection.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice Avoid subsoil penetration.

Do not flush into surface water or sanitary sewer system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state liquid; 20 °C; 1,013 hPa

Form liquid

Colour colourless

Odour characteristic

Odour Threshold No valid method available

pH Not applicable, Justification:, insoluble

Pour pointca. 6 °C; ISO 3016Boiling point/boiling rangeca. 220 - 235 °CFlash pointca. 114 °C; DIN 51758Evaporation rateNo data available

Flammability (solid, gas) not applicable (liquid)



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Lower explosion limitNo data availableUpper explosion limitNo data availableVapour pressure< 0.01 hPa; 20 °C</th>Relative vapour densityNo data available

Density ca.0.8 g/cm3; 20 °C; DIN 51757

Water solubility insoluble

Partition coefficient: n-

octanol/water

log Pow: ca. 4.7; 23 °C; OECD Test Guideline 117

Ignition temperatureca. 285 °C; ASTM E 659Auto-ignition temperaturenot auto-flammableViscosity, dynamicca. 14.1 mPas; 20 °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

Additional advice This information applies to a group of products. The specific data on the grade

referred to above can be obtained from the Product Information sheet.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note Stable at normal ambient temperature and pressure.

10.2 Chemical stability

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

Materials to avoid Strong acids and strong bases; Strong oxidizing agents; Strong reducing agents

10.6 Hazardous decomposition products

Hazardous decomposition

products

No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects



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Acute toxicity

Acute oral toxicity LD50 Rat: > 5.000 mg/kg; OPPTS 870.1100

(literature value)

Based on available data, the classification criteria are not met.

Acute inhalation toxicity LC50 Rat: > 71 mg/l; 1 h

Target Organs: Lungs

Symptoms: Salivation, Drowsiness, Shortness of breath

(literature value)

Based on available data, the classification criteria are not met.

Acute dermal toxicity LD50 Dermal Rabbit: > 5,000 mg/kg; OPPTS 870.1200

Target Organs: Skin Symptoms: Local irritation

(literature value)

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Skin irritation Rabbit: moderately irritating; OPPTS 870.2500

(literature value)

Based on available data, the classification criteria are not met.

Human experience - Skin

contact

not irritating (literature value)

Serious eye damage/eye irritation

Eye irritation Rabbit: irritating; OPPTS 870.2400

(literature value)

Causes serious eye irritation.

Respiratory or skin sensitisation

Sensitisation Buehler Test Guinea pig: not sensitizing; OPPTS 870.2600

(literature value)

Based on available data, the classification criteria are not met.

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) Category approach

Remarks 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

Repeated dose toxicity studies gave no indication of adverse effects on

reproductive organs. (literature value)
Category approach

RemarksReproductive

toxicity

Based on available data, the classification criteria are not met.

Teratogenicity Rat; Oral; OECD Test Guideline 414

Did not show teratogenic effects in animal experiments.

(literature value)



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The data are derived from the evaluations or test results achieved with similar

products (conclusion by analogy).

Test substance: octan-1-ol

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.

Rat; Oral; Subchronic toxicity Repeated dose toxicity

NOAEL: 2,000 mg/kg (based on body weight and day); OECD Test Guideline 422

(literature value)

The data are derived from the evaluations or test results achieved with similar

products (conclusion by analogy). Test substance: dodecan-1-ol

Aspiration hazard

Aspiration toxicity Based on available data, the classification criteria are not met.

Further information

Toxicological information Toxicokinetics, metabolism and distribution

extensive and rapid metabolisation

(literature value)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

LC50 (96 h) Pimephales promelas (fathead minnow): > 1 - 10 mg/l; flow-through Toxicity to fish

test; OECD Test Guideline 203

(literature value)

Toxicity to fish - Chronic

toxicity

EC10 (33 d) Pimephales promelas (fathead minnow): 0.43 mg/l; mortality; flow-

through test; OECD Test Guideline 210

Toxicity to daphnia and other

aquatic invertebrates

LC50 (96 h) Nitocra spinipes: > 1 - 10 mg/l; static test; OECD Test Guideline 202

(literature value)

Toxicity to daphnia and other aquatic invertebrates - Chronic

toxicity

NOEC (21 d) Daphnia magna (Water flea): 0.11 mg/l; reproduction rate; semi-static

test; OECD Test Guideline 211; (literature value)

Toxicity to aquatic plants EC50 (72 h) algae: > 1 - 10 mg/l; calculated; (literature value)

Category approach

Toxicity to bacteria The study is not necessary.

Justification:

Readily biodegradable.

The substance is not to be considered to be inhibitory to bacteria.

Toxicity to soil dwelling

organisms

EC50 (72 h) Caenorhabditis elegans, Worm (Nematoda): 98 mg/kg; mortality

(literature value)

Toxicity to terrestrial flora Obtaining data is technically impossible.

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.



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12.2 Persistence and degradability

Biodegradability > 60 %; 30 d; aerobic; OECD Test Guideline 301D

(literature value)

12.3 Bioaccumulative potential

Bioaccumulation Bioconcentration factor (BCF): 20; calculated

Bioaccumulation is unlikely.

12.4 Mobility in soil

Mobility Adsorption/Soil/Sewage sludge; Medium: water - soil; Koc: 1010 - 1433; OECD

Test Guideline 106 Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

Results of PBT assessment This substance is not considered to be persistent, bioaccumulating and toxic

(PBT).

This substance is not considered to be very persistent and very bioaccumulating

(vPvB).

12.6 Other adverse effects

General advice Harmful to aquatic life with long lasting effects.

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

The waste code must be determined in agreement with the regional waste disposal authority or company. 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.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

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



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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

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:: Not applicable

Directive 1999/13/EC (VOC)

The question whether this product or components thereof has/have to be considered as volatile organic compound/compounds (VOC) as defined by Directive 1999/13/EU can only be answered when detailed knowledge on the use as solvent in connection with certain activities in certain facilities is available.



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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)				
China. Inventory of Existing Chemical Substances	INV (CN)	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)				
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

decan-1-ol

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

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation. H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Safety datasheet sections which have been updated:

- 9. Physical and chemical properties
- 11. Toxicological information
- 12. Ecological 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



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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 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

DN 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.

decan-1-ol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/CON000000023_EN_01.pdf