NACOL ETHER 16

Version: *1*.08 **Revision Date 2016/10/26**

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

1.1 Product identifier

Trade name **NACOL Ether 16**

Substance name (REACH / CLP) Dihexadecyl ether

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

Use Industrial use
impregnating agent
anti-corrosion agent

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)

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

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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

CHEMICAL CHARACTERIZATION

Dihexadecyl ether

component type: Active ingredient

EC-No.: 223-900-7 **Index-No.:** **CAS-No.:** 4113-12-6
REACH No.: not available (quantity threshold for registration not reached)
Substance name (REACH / CLP): Dihexadecyl ether

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

Hexadec-1-ene

content: >= 1 - < 3 % **component type:** Impurity

EC-No.: 211-105-8	**Index-No.:**		**CAS-No.:** 629-73-2
Classification (Regulation (EC) No 1272/2008):	Asp. Tox. 1	H304	

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

Other data stabilised through the addition of an inhibitor

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.
If inhaled	Provide 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.
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	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

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.

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

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: Dihexadecyl ether

Not relevant / not applicable

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: Dihexadecyl ether

Not relevant / not applicable

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 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 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: Fluorinated rubber
Break through time: >= 480 min
Layer thickness: 0.4 mm

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

unsuitable gloves

Material: Natural rubber/natural latex, Polychloroprene, butyl-rubber

Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear suitable protective equipment.
Hygiene measures	Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Wear suitable gloves and eye/face protection.
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	solid; 20 °C; 1,013 hPa
Form	solid
Colour	white
Odour	characteristic
Odour Threshold	No valid method available
pH	Not applicable
Melting point/range	54 °C; 1,013 hPa
Flash Point	233 °C; DIN ISO 2592
Evaporation rate	Not relevant / not applicable Justification: Solid
Flammability (solid, gas)	No data available
Lower explosion limit	Not applicable Justification: Solid
Upper explosion limit	Not applicable Justification: Solid
Vapour pressure	< 0.1 hPa; 20 °C
Relative vapour density	Not applicable, Justification: Solid
Density	0.795 g/cm3; 60 °C; DIN 51757
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Ignition temperature	Not relevant, solid with a melting point < 160°C
Auto-ignition temperature	No data available
Viscosity, dynamic	7.8 mPas; 60 °C

Viscosity, kinematic	4.1 mm2/s; 60 °C
Explosive properties	not expected based on structure and functional groups
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

Note	No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	None known.

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	None known.;

10.6 Hazardous decomposition products

Hazardous decomposition products	No decomposition if stored normally.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Dihexadecyl ether: LD50 Rat: > 5,000 mg/kg; OECD Test Guideline 401 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: dioctadecyl ether Based on available data, the classification criteria are not met.
Acute inhalation toxicity	Dihexadecyl ether: The study is not necessary. Justification: Negligible or unlikely exposure pathways Sufficient data are available from alternative routes of exposure.
Acute dermal toxicity	Dihexadecyl ether: LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 402 (literature value) The data are derived from the evaluations or test results achieved with similar

products (conclusion by analogy).
Test substance: Dioctyl ether
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Skin irritation

Dihexadecyl ether:
Rabbit: not irritating; OECD Test Guideline 404
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether
Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Eye irritation

Dihexadecyl ether:
Rabbit: slightly irritating; OECD Test Guideline 405
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Sensitisation

Dihexadecyl ether:
Buehler Test Guinea pig: not sensitizing; OECD Test Guideline 406
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity in vitro

Dihexadecyl ether:
Ames test: not mutagenic; OECD Test Guideline 471
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether

Dihexadecyl ether:
Chromosome aberration test in vitro: not mutagenic; OECD Test Guideline 473
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: Dioctyl ether

Dihexadecyl ether:
Mammalian cell gene mutation assay: not mutagenic; OECD Test Guideline 476
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: Dioctyl ether

Genotoxicity in vivo

Dihexadecyl ether:
No data available

Remarks

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

Carcinogenicity

Carcinogenicity

Dihexadecyl ether:
This information is not available.

Reproductive toxicity

Reproductive toxicity	Dihexadecyl ether: study scientifically unjustified Repeated dose toxicity studies gave no indication of adverse effects on reproductive organs. No embryotoxic effects have been observed in animal tests.
Teratogenicity	Dihexadecyl ether: Rat; Oral NOAEL: 1,000 mg/kg (based on body weight and day) NOAEL (pregnant female): 1,000 mg/kg (based on body weight and day); OECD Test Guideline 414 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Dioctyl ether
Remarks-Teratogenicity	Dihexadecyl ether: Based on available data, the classification criteria are not met.

STOT - single exposure

Remarks	Dihexadecyl ether: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Remarks	Dihexadecyl ether: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Dihexadecyl ether: Rat; Oral; 90-day NOAEL: 1,000 mg/kg (based on body weight and day); OECD Test Guideline 408 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Dioctyl ether

Aspiration hazard

Aspiration toxicity	Dihexadecyl ether: Not applicable
Toxicological information	Dihexadecyl ether: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	Dihexadecyl ether: LC50 (96 h) Danio rerio (zebra fish): > 100 mg/l ; semi-static test; ISO 7346/1-3 (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: dioctadecyl ether
Toxicity to daphnia and other aquatic invertebrates	Dihexadecyl ether: EC50 (48 h) Daphnia magna (Water flea): > 100 mg/l ; static test; OECD Test Guideline 202

(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether

Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity

Dihexadecyl ether:
No data available

Toxicity to aquatic plants

Dihexadecyl ether:
EL50 (72 h) Pseudokirchneriella subcapitata (green algae): > 100 mg/l ; Growth rate; static test; OECD Test Guideline 201; (literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).Test substance: dioctadecyl ether

Dihexadecyl ether:
NOELR (72 h) Pseudokirchneriella subcapitata (green algae): 100 mg/l ; Growth rate; static test; OECD Test Guideline 201; (literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).Test substance: dioctadecyl ether

Toxicity to bacteria

Dihexadecyl ether:
EC10 (3 h) activated sludge, domestic: > 1,000 mg/l; static test; OECD Test Guideline 209
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: dioctadecyl ether

Toxicity to soil dwelling organisms

Dihexadecyl ether:
The study is not necessary.
Justification:
Readily biodegradable

Toxicity to terrestrial flora

Dihexadecyl ether:
The study is not necessary.
Justification:
Readily biodegradable

Toxicity for other terrestrial non-mammalian fauna

Dihexadecyl ether:
The study is not necessary.
Justification:
Readily biodegradable

12.2 Persistence and degradability

Biodegradability

Dihexadecyl ether:
Readily biodegradable; > 60 %; 28 d
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: Dioctyl ether

12.3 Bioaccumulative potential

Bioaccumulation

Dihexadecyl ether:
No data available

12.4 Mobility in soil

Mobility

Dihexadecyl ether:
No data available

12.5 Results of PBT and vPvB assessment

Results of PBT assessment

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

12.6 Other adverse effects

General advice	Dihexadecyl ether: 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	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

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 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

NOTIFICATION STATUS

US. Toxic Substances Control Act	TSCA	not listed (product or constituents are not listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	not listed (product or constituents are not listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	not listed (product or constituents are not listed)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	not listed (product or constituents are not listed)
Japan. Kashin-Hou Law List	ENCS (JP)	not listed (product or constituents are not 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)
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

Dihexadecyl ether

A Chemical Safety Assessment is not required for this substance (quantity threshold for registration not reached).

SECTION 16: OTHER INFORMATION

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

H304	May be fatal if swallowed and enters airways.

Safety datasheet sections which have been updated:

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 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.
PLEASE NOTE: This is a preliminary safety data sheet, drawn up exclusively for sample shipment!
New findings, especially with regard to toxicology and ecology, in future may require different labelling.

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