

PARAFOL 16 - 97

Version: 3.05

Revision Date 11.01.2019

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

Trade name	PARAFOL 16 - 97
INCI	Hexadecane
REACH No.	01-2119936836-25-0000
Substance name (REACH / CLP)	Hexadecane

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

Use	Industrial use heat transfer medium raw material for cosmetic agents
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)
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Aspiration hazard Category 1 May be fatal if swallowed and enters airways.

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

Danger

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Hazard statements

H304 May be fatal if swallowed and enters airways.

Precautionary statements

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P331 Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements

EUH066 Repeated exposure may cause skin dryness or cracking.

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

Hexadecane

component type: Active ingredient

EC-No.: 208-878-9

Index-No.:

CAS-No.: 544-76-3

REACH No.: 01-2119936836-25-0000

Substance name (REACH / CLP): Hexadecane

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.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible).
If inhaled	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	If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting.

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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: Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

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 Standard procedure for chemical fires. Use water spray to cool unopened containers.

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.
Avoid contact with skin and eyes.

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Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. 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**

Store in original container. Keep container tightly closed.

Storage class (TRGS 510)

10: Combustible liquids not in Storage Class 3

Other data

Stable at normal ambient temperature and pressure.

container material

suitable materials: Steel

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: Hexadecane**

Not relevant / not applicable

PREDICTED NO EFFECT CONCENTRATION (PNEC)**Substance name: Hexadecane**

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 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.

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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

gloves suitable for splash protection:

Material: Polychloroprene
Break through time: >= 240 min
Layer thickness: 0,5 mm

unsuitable gloves

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

Eye protection

Tightly fitting safety goggles

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	faint, hydrocarbon-like
Odour Threshold	No data available
pH	Not applicable, Justification:, insoluble
Melting point/range	ca. 17 °C
Boiling point/boiling range	ca. 287 °C
Flash point	135 °C; DIN 51758
Evaporation rate	No data available
Flammability (solid, gas)	not applicable (liquid)

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Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	< 5 Pa; 20 °C; NF T 20-048 < 5 Pa; 50 °C; NF T 20-048
Relative vapour density	
Density	0,773 g/cm ³ ; 25 °C 0,759 g/cm ³ ; 40 °C
Water solubility	insoluble
Partition coefficient: n-octanol/water	log Pow: ca. 8; Calculated according to EPA
Ignition temperature	No data available
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	ca. 2,2 mPas; 40 °C
Viscosity, kinematic	3 mm ² /s; 40 °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 under recommended storage conditions.**10.2 Chemical stability****Note** Stable under normal conditions.**10.3 Possibility of hazardous reactions****Hazardous reactions** Heating can release hazardous gases.
Vapours may form explosive mixture with air.**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 oxidizing agents;**10.6 Hazardous decomposition products****Hazardous decomposition products** No decomposition if stored normally.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects**Acute toxicity**

Acute oral toxicity	Hexadecane: LD50 Rat: > 5.000 mg/kg; OECD Test Guideline 401 (literature value) Category approach Based on available data, the classification criteria are not met.
Acute inhalation toxicity	Hexadecane: LC50 Rat: > 5 mg/l; 4 h; OECD Test Guideline 403 Test atmosphere: dust/mist Category approach (literature value) Based on available data, the classification criteria are not met.
Acute dermal toxicity	Hexadecane: LD50 Rat: > 2.000 mg/kg; OECD Test Guideline 402 (literature value) Category approach Based on available data, the classification criteria are not met.

Skin corrosion/irritation

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

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

Sensitisation	Hexadecane: Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406 (literature value) Category approach Based on available data, the classification criteria are not met.
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Germ cell mutagenicity

Genotoxicity in vitro	Hexadecane: In vitro tests did not show mutagenic effects Category approach
Genotoxicity in vivo	Hexadecane: In vivo tests did not show mutagenic effects Category approach

Remarks	Hexadecane: Based on available data, the classification criteria are not met.
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Carcinogenicity

Remarks	Hexadecane: Based on available data, the classification criteria are not met.
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Reproductive toxicity

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Reproductive toxicity	Hexadecane: No data available
Teratogenicity	Hexadecane: Rat NOAEL: > 1.000 mg/kg (based on body weight and day) NOAEL (pregnant female): > 1.000 mg/kg (based on body weight and day) Category approach
Remarks-Teratogenicity	Hexadecane: Did not show teratogenic effects in animal experiments.
STOT - single exposure	
Remarks	Hexadecane: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	Hexadecane: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Hexadecane: Rat; Oral; Subchronic toxicity NOAEL: > 5.000 mg/kg (based on body weight and day); OECD Test Guideline 408 Category approach
Aspiration hazard	
Aspiration toxicity	Hexadecane: May be fatal if swallowed and enters airways.
Human experience	Hexadecane: Repeated exposure may cause skin dryness or cracking. No skin irritation Until now, sensitisation has not occurred during handling.
Toxicological information	Hexadecane: The substance is predicted to be bioavailable via the oral route. The substance is poorly absorbed via skin. extensive and rapid metabolisation The substance is rapidly eliminated from the body. Category approach (literature value)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	Hexadecane: LL50 (96 h) <i>Scophthalmus maximus</i> : > 100 mg/l ; static test (literature value) Category approach
Toxicity to fish - Chronic toxicity	Hexadecane: NOEL (28 d) <i>Oncorhynchus mykiss</i> (rainbow trout): > 1.000 mg/l; Growth rate; QSAR Category approach In the range of water solubility not toxic under test conditions.

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	(literature value)
Toxicity to daphnia and other aquatic invertebrates	Hexadecane: LL50 (48 h) <i>Acartia tonsa</i> : > 100 mg/l (literature value) Category approach
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	Hexadecane: NOEL (21 d) <i>Daphnia magna</i> (Water flea): > 1.000 mg/l; reproduction rate; QSAR; Category approach In the range of water solubility not toxic under test conditions. (literature value)
Toxicity to aquatic plants	Hexadecane: EL50 (72 h) <i>Skeletonema costatum</i> (marine diatom): > 100 mg/l ; (literature value) Category approach
Toxicity to bacteria	Hexadecane: EC50 (3 h) activated sludge of a predominantly domestic sewage: > 100 mg/l; OECD Test Guideline 209 Category approach (literature value)
Toxicity to soil dwelling organisms	Hexadecane: The study is not necessary. Justification: Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
Toxicity to terrestrial flora	Hexadecane: The study is not necessary. Justification: Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
Toxicity for other terrestrial non-mammalian fauna	Hexadecane: The study is not necessary. Justification: Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
12.2 Persistence and degradability	
Biodegradability	Hexadecane: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 306 (literature value) Category approach Hexadecane: rapidly biodegradable; > 60 %; 28 d; aerobic; OECD Test Guideline 301F The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: n-Tetradecane - n-Heptadecane
12.3 Bioaccumulative potential	
Bioaccumulation	Hexadecane: Bioaccumulation is unlikely. Category approach (literature value)
12.4 Mobility in soil	
Mobility	Hexadecane: Substance is a UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	Hexadecane: Category approach

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

12.6 Other adverse effects**General advice**Hexadecane:
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

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

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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

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NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	listed (product or constituents are listed)
US. Toxic Substances Control Act	TSCA	listed (product or constituents are listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	listed (product or constituents are listed)
Japan. Kashin-Hou Law List	ENCS (JP)	listed (product or constituents are listed)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	listed (product or constituents are listed)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	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)

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

Hexadecane

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.

H304 May be fatal if swallowed and enters airways.

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. 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

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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.

Hexadecane

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000005272_EN_01.pdf