

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

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

Trade name	LINPAR 17
Substance name (REACH / CLP)	Heptadecane

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

Use	industrial use Heat storage medium
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:	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.
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Classification (67/548/EEC, 1999/45/EC)

Harmful	Harmful: may cause lung damage if swallowed.
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2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Hazard pictograms**

Signal word	Danger
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Hazard statements

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

H304	May be fatal if swallowed and enters airways.
Precautionary statements	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
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

No hazards to be specially mentioned.

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

n-Heptadecane

component type: Active ingredient

EC-No.: 211-108-4	Index-No.:	CAS-No.: 629-78-7
REACH No.: not available (quantity threshold for registration not reached)		
Substance name (REACH / CLP): n-heptadecane		
Classification (Directive 67/548/EEC):	Xn	R65;
Classification (Regulation (EC) No 1272/2008):	Asp. Tox. 1	H304

For the full text of the R-phrases mentioned in this Section, see Section 16.
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	In the case of inhalation of aerosol/mist consult a physician if necessary. Consult a physician after significant exposure.
In case of skin contact	Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If eye irritation persists, consult a specialist.
If swallowed	Do NOT induce vomiting. Keep respiratory tract clear. Call a physician

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

immediately.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed

Risks: Risk of product entering the lungs on vomiting after ingestion.

4.3 Indication of any immediate medical attention and special treatment needed

Indication of any immediate medical attention and special treatment needed

Treatment: Call a physician immediately.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Water mist, Carbon dioxide (CO₂), Foam, Dry chemical, Keep containers and surroundings cool with water spray.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting

In case of fire hazardous decomposition products may be produced such as:
Carbon dioxide (CO₂)
Carbon monoxide

5.3 Advice for firefighters

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit.

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.

Special precautions

Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions

If the product contaminates rivers and lakes or drains inform respective authorities. 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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). After cleaning, flush away traces with water.

6.4 Reference to other sections

For personal protection see section 8.

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Avoid inhalation, ingestion and contact with skin and eyes. Do not breathe vapours or spray mist. Smoking, eating and drinking should be prohibited in the application area.
Advice on protection against fire and explosion	Normal measures for preventive fire protection. Keep away from combustible material. Take precautionary measures against static discharges. No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	No special storage conditions required. Keep in a well-ventilated place.
Storage class (TRGS 510)	10: Combustible liquids not in Storage Class 3
Other data	Protect from frost, heat and sunlight.
container material	suitable materials: Stainless steel

7.3 Specific end use(s)

Specific use(s)	This information is not available.
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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

8.2 Exposure controls

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	Breathing apparatus with filter.
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

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

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: \geq 480 min
Material thickness: 0,4 mm

gloves suitable for splash protection:

Material: Nitrile rubber/nitrile latex
Break through time: \geq 240 min
Material thickness: 0,35 mm

unsuitable gloves

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

Eye protection	Safety glasses, Face-shield
Skin and body protection	Protective suit, Complete suit protecting against chemicals
Hygiene measures	General industrial hygiene practice.
Protective measures	Avoid contact with eyes. Wear suitable gloves and eye/face protection.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	If the product contaminates rivers and lakes or drains inform respective authorities.
Soil	Avoid subsoil penetration.
Water	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
Form	Liquid
Colour	clear, colourless
Odour	odourless
Odour Threshold	No valid method available
pH	not applicable, Justification:., insoluble
pour point	22 °C; 1.013 hPa
Boiling point/boiling range	300 - 305 °C; 1.013 hPa
Flash point	149 °C; 1.013 hPa
Evaporation rate	No data available
Flammability (solid, gas)	not applicable (liquid)
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	> 0,1 hPa; 25 °C

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

Relative vapour density	No data available
Density	ca.0,78 - 0,79 g/cm ³ ; 15 °C
Bulk density	not determined
Solubility in other solvents	Medium: Hexane; 20 °C; soluble
Water solubility	20 °C; 1.013 hPa; insoluble
Partition coefficient: n-octanol/water	POW: 9,25; 25 °C; OECD Test Guideline 117
Ignition temperature	> 200 °C; 1.013 hPa
Auto-ignition temperature	min. 200 °C; 1,013 hPa
Viscosity, kinematic	4 - 5 mm ² /s; 20 °C
Explosive properties	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups
Surface tension	27,91 mN/m; 25 °C

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note	No decomposition if stored and applied as directed.
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10.2 Chemical stability

Note	Stable
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10.3 Possibility of hazardous reactions

Hazardous reactions	None known.
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10.4 Conditions to avoid

Conditions to avoid	Heat, flames and sparks.
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10.5 Incompatible materials to avoid

Materials to avoid	Strong oxidizing agents;
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10.6 Hazardous decomposition products

Hazardous decomposition products	No decomposition if stored normally.
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Thermal decomposition	No decomposition if used as directed.
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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

Acute oral toxicity	n-Heptadecane: LD50 rat: > 2.000 mg/kg; OECD Test Guideline 401 (literature value) Category approach Based on available data, the classification criteria are not met.
Acute inhalation toxicity	n-Heptadecane: 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	n-Heptadecane: 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	n-Heptadecane: rabbit: slightly irritating; OECD Test Guideline 404 (literature value) Category approach Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	
Eye irritation	n-Heptadecane: rabbit: slightly irritating; OECD Test Guideline 405 (literature value) Category approach Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	
Sensitisation	n-Heptadecane: Maximisation Test (GPMT) guinea pig: not sensitizing; OECD Test Guideline 406 (literature value) Category approach Based on available data, the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity in vitro	n-Heptadecane: In vitro tests did not show mutagenic effects Category approach
Genotoxicity in vivo	n-Heptadecane: In vivo tests did not show mutagenic effects Category approach
Remarks	n-Heptadecane: Based on available data, the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	n-Heptadecane: The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential.
Remarks	n-Heptadecane: Based on available data, the classification criteria are not met.
Reproductive toxicity	
Reproductive toxicity	n-Heptadecane: Two-generation study: rat; OECD Test Guideline 416 Fertility and developmental toxicity tests did not reveal any effect on reproduction.

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

	The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Distillates (Fischer-Tropsch), C8-26 - branched and linear
RemarksReproductive toxicity	n-Heptadecane: Based on available data, the classification criteria are not met.
Teratogenicity	n-Heptadecane: rat; Oral NOAEL: 1.000 mg/kg (based on body weight and day) NOAEL (dam): 1.000 mg/kg (based on body weight and day); OECD Test Guideline 414 (literature value)
Remarks-Teratogenicity	n-Heptadecane: Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	n-Heptadecane: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	n-Heptadecane: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	n-Heptadecane: 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	n-Heptadecane: May be fatal if swallowed and enters airways.
Toxicological information	n-Heptadecane: 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	n-Heptadecane: LL50 (96 h) <i>Scophthalmus maximus</i> : > 100 mg/l; static test (literature value) Category approach
Toxicity to fish - Chronic toxicity	n-Heptadecane: NOEL (28 d) <i>Oncorhynchus mykiss</i> (rainbow trout): > 1.000 mg/l; Growth rate; QSAR In the range of water solubility not toxic under test conditions. (literature value)

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

Toxicity to daphnia and other aquatic invertebrates	n-Heptadecane: LL50 (48 h) other aquatic arthropod: > 100 mg/l (literature value) Category approach
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	n-Heptadecane: NOEL (21 d) Daphnia magna (Water flea): > 1.000 mg/l; reproduction rate; QSAR; In the range of water solubility not toxic under test conditions. (literature value)
Toxicity to aquatic plants	n-Heptadecane: EL50 (72 h) Skeletonema costatum: > 100 mg/l; ; (literature value) Category approach
Toxicity to bacteria	n-Heptadecane: 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	n-Heptadecane: The study is not necessary. Justification: Readily biodegradable.
Toxicity to terrestrial flora	n-Heptadecane: The study is not necessary. Justification: Readily biodegradable.
Toxicity for other terrestrial non-mammalian fauna	n-Heptadecane: Reproduction Test; NOEL: 10000 mg/kg food; 26 Weeks; Anas platyrhynchos (Mallard duck) (literature value) The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: Paraffin mixture
12.2 Persistence and degradability	
Biodegradability	n-Heptadecane: Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 306 (literature value) Category approach
12.3 Bioaccumulative potential	
Bioaccumulation	n-Heptadecane: Bioaccumulation is unlikely. Category approach (literature value)
12.4 Mobility in soil	
Mobility	n-Heptadecane: Adsorption/Soil; log Koc: 9,63; calculated (literature value)
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	n-Heptadecane: Category approach Based on available data, the classification criteria are not met.
12.6 Other adverse effects	
General advice	n-Heptadecane: None known.

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Can be incinerated, when in compliance with local regulations.
Contaminated packaging	Empty remaining contents.
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

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

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

Directive 96/82/EC on the control of major-accident hazards involving dangerous substances list entry in the directive: Directive 96/82/EC does not apply

NOTIFICATION STATUS

US. Toxic Substances Control Act	TSCA	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	q (quantity restricted)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	n (Negative listing)
Japan. Kashin-Hou Law List	ENCS (JP)	y (positive listing)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	y (positive listing)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	y (positive listing)
China. Inventory of Existing Chemical Substances	INV (CN)	y (positive listing)
Switzerland. Consolidated Inventory	CH INV	y (positive listing)

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

n-heptadecane

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

LINPAR 17

Version: 1.01

Revision Date 17.12.2014

SECTION 16: OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R65 Harmful: may cause lung damage if swallowed.

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

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



LINPAR 17

Version: 1.01

Revision Date 17.12.2014
