BECKER LUBE SM 100

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	26.07.2023	28300010303	Country / Language: DE / 6N (EN)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : BECKER LUBE SM 100

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

Use of the Sub-stance/Mixture : Lubricant

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the sa

Company : Gebr. Becker GmbH
Hölker Feld 29-31
42277 Wuppertal
Germany
(+49) 0202-697-0

Responsible Department : For questions concerning the content of this safety data sheet, please send an email to Info@becker-international.com.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Additional Labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1 270-128-1 01-2119491299-23	Repr. 2; H361f	>= 0,1 - < 1
Substances with a workplace exposure limit :			
1-Decene, homopolymer, hydrogenated (≥PAO10)	68037-01-4		>= 70 - < 90

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Do not leave the victim unattended.

Move out of dangerous area.
Keep warm and in a quiet place.
Show this safety data sheet to the doctor in attendance.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact	:	Get medical attention if symptoms occur. Wash off with soap and plenty of water.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Get medical attention if symptoms appear.
If swallowed	:	Rinse mouth with water. Do not induce vomiting unless directed to do by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	No symptoms known or expected. See Section 11 for more detailed information on health effects and symptoms. Get medical attention if symptoms appear.
Risks	:	No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine. For specialist advice physicians should contact the Poisons Information Service. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Alcohol-resistant foam Carbon dioxide (CO2) Dry powder Sand Water mist
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon monoxide Carbon dioxide (CO2)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
Further information	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protection equipment. Do not touch or walk through spilt material. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering.

6.2 Environmental precautions

Environmental precautions	:	No special environmental precautions required. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Stop leak if safe to do so. Move containers from spill area. Wash spillages into an effluent treatment plant or proceed as follows. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Dispose of wastes in an approved waste disposal facility. Do not allow into the sewerage system, surface waters or groundwater or into the soil.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking

and smoking.
Put on appropriate personal protection equipment.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate container to avoid environmental contamination.

Advice on common storage : No special restrictions on storage with other products.

Storage class (TRGS 510) : 10, Combustible liquids

Further information on storage stability : Stable under recommended storage conditions.

7.3 Specific end use(s)

Specific use(s) : Raw material for industry

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
1-Decene, homopolymer, hydrogenated (≥PAO10)	68037-01-4	AGW (Alveolate fraction)	5 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Workers	Inhalation	Long-term exposure, Systemic effects	4,37 mg/m3
	Workers	Dermal	Long-term exposure, Systemic effects	0,62 mg/kg
	Consumers	Inhalation	Long-term exposure, Systemic effects	1,09 mg/m3
	Consumers	Dermal	Long-term exposure, Systemic effects	0,31 mg/kg
	Consumers	Oral	Long-term exposure, Systemic effects	0,31 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Fresh water	0,051 mg/l
	Marine water	0,0051 mg/l
	Secondary Poisoning	0,51 mg/l
	Fresh water sediment	9320 mg/kg
	Marine sediment	932 mg/kg
	Soil	1860 mg/kg
	Sewage treatment plant	1 mg/l

8.2 Exposure controls

Engineering measures

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Safety glasses with side-shields conforming to EN166

Hand protection
Material : Polyvinyl alcohol or nitrile- butyl-rubber gloves

Remarks : Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Before removing gloves clean them with soap and water. Request information on glove permeation properties from the glove supplier.

		The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.
Skin and body protection	:	Wear suitable protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Impervious clothing
Respiratory protection	:	No personal respiratory protective equipment normally required. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. In the case of vapour formation use a respirator with an approved filter. In the case of dust or aerosol formation use respirator with an approved filter. Respirator with combination filter for vapour/particulate (EN 141)
Protective measures	:	Please follow all applicable local/national requirements when selecting protective measures for a specific workplace. These recommendations apply to the product as supplied.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	clear
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	261 °C

		Method: ASTM D 92
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	99,4 mm2/s (40 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Density	:	0,842 g/cm3 (15 °C)
Relative vapour density	:	No data available

9.2 Other information

Explosives	:	No data available
		No data available
Oxidizing properties	:	No data available
		No data available
Flammability (liquids)	:	No data available
Flammable solids		
Burning number	:	No data available
Self-ignition	:	No data available

No data available

Self-heating substances	:	No data available
Evaporation rate	:	No data available
Miscibility with water	:	No data available
		No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture
Contamination

10.5 Incompatible materials

Materials to avoid : Strong acids and oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

Product:

Acute dermal toxicity : Remarks: Not classified due to lack of data.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5.000 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: no Assessment: The substance or mixture has no acute dermal toxicity Remarks: Dosage caused no mortality

Skin corrosion/irritation

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Mild skin irritation
GLP	:	no

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	no

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks	:	Not classified due to lack of data.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes

Germ cell mutagenicity

Not classified based on available information.

Product:

Germ cell mutagenicity- Assessment	:	Not classified due to lack of data.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Genotoxicity in vitro : Test Type: Micronucleus test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative
GLP: no
Remarks: Test results on an analogous product

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Assessment : Not classified due to lack of data.

Reproductive toxicity

Not classified based on available information.

Product:

Reproductive toxicity - Assessment : Not classified due to lack of data.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 25-75-225 milligram per kilogram
General Toxicity - Parent: NOAEL: 25 mg/kg bw/day
Fertility: NOEL: 225 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: yes

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit, female
Application Route: Oral
Dose: 10-30-100 milligram per kilogram
General Toxicity Maternal: NOAEL: 30 mg/kg bw/day
Teratogenicity: NOAEL: 100 mg/kg bw/day
Developmental Toxicity: NOEL: 30 mg/kg bw/day
Method: OECD Test Guideline 414
Result: Embryotoxic effects and adverse effects on the off-

spring were detected only at high maternally toxic doses
GLP: yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

Not classified based on available information.

Product:

Assessment : Not classified due to lack of data.

STOT - repeated exposure

Not classified based on available information.

Product:

Assessment : Not classified due to lack of data.

Repeated dose toxicity

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rat, male and female
NOAEL	:	25 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	25-75-225 mg/kg bw/d
Method	:	OECD Test Guideline 422
GLP	:	yes
Remarks	:	Subacute toxicity

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water
nominal concentration

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: Fresh water
nominal concentration

NOEC (Desmodesmus subspicatus (green algae)): > 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l End point: Respiration inhibition Exposure time: 3 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 209 GLP: no Remarks: Fresh water nominal concentration
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EL10: 1,69 mg/l End point: Reproduction Exposure time: 21 Days Species: Daphnia magna (Water flea) Test Type: semi-static test Analytical monitoring: no Method: OECD Test Guideline 211 GLP: yes Remarks: Fresh water nominal concentration water extractable fraction

1-Decene, homopolymer, hydrogenated (≥PAO10):

Toxicity to fish	:	LC50 (Fish): > 1.000 mg/l Exposure time: 96 h

12.2 Persistence and degradability

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Biodegradability	:	Test Type: aerobic Inoculum: activated sludge, non-adapted Concentration: 20,1 mg/l Result: Not readily biodegradable. Biodegradation: 1 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes

1-Decene, homopolymer, hydrogenated (≥PAO10):

Biodegradability	:	Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Partition coefficient: n-	:	log Pow: 6,66 (23 °C)

octanol/water	pH: 6,67 Method: OECD Test Guideline 123 GLP: yes Remarks: Based on data from similar materials

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
This product has no known ecotoxicological effects.
The product itself has not been tested.
Avoid release to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of wastes in an approved waste disposal facility.
In accordance with local and national regulations.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Hazard and Handling Notes.	:	Not dangerous cargo. Keep dry. Keep separated from foodstuffs.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75 Do not use for tattooing purposes.
International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors.	:	Neither banned nor restricted
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water hazard class (Germa-	:	WGK 1 slightly hazardous to water

ny) Remarks: self classification

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

Full text of H-Statements

H361f	:	Suspected of damaging fertility.

Full text of other abbreviations

Repr.	:	Reproductive toxicity
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.