

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

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

Trade name	MARLIPAL 24/99
INCI	Laureth-9

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

Use	Industrial use raw material for cosmetic agents raw material for washing and cleaning agents surface-active substance
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) 23 65 - 49 22 32
----------------------------	---------------------------

**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity Category 4 (Oral)	Harmful if swallowed.
Serious eye damage Category 1	Causes serious eye damage.
Long-term (chronic) aquatic hazard Category 3	Harmful to aquatic life with long lasting effects.

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

Signal word	Danger
-------------	--------

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**Hazard statements**

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear eye protection/ face protection.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/ container to an approved waste disposal plant.

**Hazardous components which must be listed on the label:**

- Alcohols, C12-14 (even numbered), ethoxylated (CAS: 68439-50-9)

**2.3 Other hazards**

Danger of slipping after spill or leakage.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

This product is a mixture 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****Alcohols, C12-14, ethoxylated ( $\geq 2.5$  EO)****content:**  $\geq 90$  -  $\leq 100$  %**component type:** Active ingredient**EC-No.:** 932-106-6**Index-No.:****CAS-No.:** 68439-50-9**REACH No.:** Not relevant (polymer)**Substance name (REACH / CLP):** Alcohols, C12-14 (even numbered), ethoxylated (CAS: 68439-50-9)**Classification (Regulation (EC) No 1272/2008):**

Acute Tox.	4 (Oral)	H302
Eye Dam.	1	H318
Aquatic Chronic	3	H412

**Specific Concentration Limits (see section 11)**

> 10 %	Eye Dam. Category 1; H318
> 1 - 10 %	Eye Irrit. Category 2; H319

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**

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

---

<b>General advice</b>	If you feel unwell, seek medical advice (show the label where possible). Take off all contaminated clothing immediately.
<b>If inhaled</b>	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.
<b>In case of skin contact</b>	Wash off immediately with plenty of water. Consult a physician if necessary.
<b>In case of eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>If swallowed</b>	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**

<b>Most important symptoms and effects, both acute and delayed</b>	Symptoms: No information available. Risks: No information available.
--	---

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Indication of any immediate medical attention and special treatment needed</b>	Treatment: No information available.
---	--------------------------------------

---

**SECTION 5: FIREFIGHTING MEASURES**

---

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	Water spray, Dry powder, Foam, Carbon dioxide (CO <sub>2</sub> )
-------------------------------------	--

**5.2 Special hazards arising from the substance or mixture**

<b>Specific hazards during firefighting</b>	Dangerous gases or fumes may occur in case of fire.
---	---

**5.3 Advice for firefighters**

<b>Special protective equipment for firefighters</b>	Wear self-contained breathing apparatus for firefighting if necessary.
<b>Further information</b>	Standard procedure for chemical fires.

---

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

---

**6.1 Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Use personal protective equipment.
-----------------------------	------------------------------------

**6.2 Environmental precautions**

<b>Environmental precautions</b>	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.
----------------------------------	---

**6.3 Methods and materials for containment and cleaning up**

<b>Methods for cleaning up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). The material taken up must be disposed of in accordance with regulations.
--------------------------------	--

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**6.4 Reference to other sections**

For personal protection see section 8.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

<b>Advice on safe handling</b>	Wear personal protective equipment. Avoid contact with skin and eyes.
<b>Advice on protection against fire and explosion</b>	Normal measures for preventive fire protection. Do not spray on a naked flame or any incandescent material.
<b>Fire-fighting class</b>	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**

<b>Requirements for storage areas and containers</b>	Keep tightly closed in a dry and cool place.
<b>Storage class (TRGS 510)</b>	10-13: German Storage Class 10 to 13
<b>Other data</b>	Stable at normal ambient temperature and pressure.

**7.3 Specific end use(s)**

<b>Specific use(s)</b>	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:** Alcohols, C12-14 (even numbered), ethoxylated (CAS: 68439-50-9)

No data available

**PREDICTED NO EFFECT CONCENTRATION (PNEC)****Substance name:** Alcohols, C12-14 (even numbered), ethoxylated (CAS: 68439-50-9)

No data available

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**8.2 Exposure controls****PERSONAL PROTECTIVE EQUIPMENT**

<b>Respiratory protection</b>	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.
<b>Hand protection</b>	<p>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).</p> <p><b>gloves suitable for permanent contact:</b> Material: butyl-rubber Break through time: <math>\geq</math> 480 min Layer thickness: <math>\geq</math> 0,7 mm</p> <p><b>gloves suitable for splash protection:</b> Material: Nitrile rubber/nitrile latex Break through time: <math>\geq</math> 30 min Layer thickness: <math>\geq</math> 0,4 mm</p>
<b>Eye protection</b>	Tightly fitting safety goggles, Safety glasses with side-shields
<b>Skin and body protection</b>	Wear suitable protective equipment.
<b>Hygiene measures</b>	Avoid contact with the skin and the eyes. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke.
<b>Protective measures</b>	Avoid contact with the skin and the eyes. Wear suitable gloves and eye/face protection.

**ENVIRONMENTAL EXPOSURE CONTROLS**

<b>General advice</b>	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**

<b>Physical state</b>	liquid; 20 °C; 1.013 hPa
<b>Form</b>	liquid
<b>Colour</b>	clear

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

---

<b>Odour</b>	mild
<b>Odour Threshold</b>	No valid method available
<b>pH</b>	5 - 7; 20 g/l; 20 °C
<b>Melting point/range</b>	8 °C
<b>Flash point</b>	Not applicable Justification: as aqueous solution
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	not applicable (liquid)
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapour pressure</b>	< 0,1 hPa; 20 °C
<b>Relative vapour density</b>	> 1
<b>Density</b>	ca. 1,0 g/cm <sup>3</sup> ; 20 °C
<b>Water solubility</b>	20 °C; completely miscible
<b>Partition coefficient: n-octanol/water</b>	not applicable (mixture)
<b>Ignition temperature</b>	ca. 330 °C; DIN 51794
<b>Auto-ignition temperature</b>	not auto-flammable
<b>Viscosity, dynamic</b>	No data available
<b>Explosive properties</b>	not expected based on structure and functional groups
<b>Oxidizing properties</b>	not expected based on structure and functional groups
<b>9.2 Other data</b>	
<b>Additional advice</b>	no data

**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** Strong acids and oxidizing agents;

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**10.6 Hazardous decomposition products**

<b>Hazardous decomposition products</b>	No decomposition if stored and applied as directed.
<b>Thermal decomposition</b>	Hazardous decomposition products formed under fire conditions.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity**

<b>Acute oral toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): LD50 Rat: > 300 - 2.000 mg/kg Category approach own test results/literature values Harmful if swallowed.
<b>Acute inhalation toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): No data available
<b>Acute dermal toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): LD50 Rabbit: > 2.000 mg/kg; Category approach (literature value) Based on available data, the classification criteria are not met.

**Skin corrosion/irritation**

<b>Skin irritation</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Rabbit: not irritating own test results/literature values Category approach Based on available data, the classification criteria are not met.
------------------------	---

**Serious eye damage/eye irritation**

<b>Eye irritation</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Rabbit: Irreversible effects on the eye own test results/literature values Category approach Causes serious eye damage.  Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Category approach Test substance: 10% dilution Causes serious eye irritation.
-----------------------	---

**Respiratory or skin sensitisation**

<b>Sensitisation</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Maximisation Test Guinea pig: not sensitizing Category approach (literature value) Based on available data, the classification criteria are not met.
----------------------	--

**Germ cell mutagenicity**

<b>Genotoxicity in vitro</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): In vitro tests did not show mutagenic effects Category approach own test results/literature values
<b>Genotoxicity in vivo</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): In vivo tests did not show mutagenic effects

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

<b>Remarks</b>	Category approach (literature value)
	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	
<b>Carcinogenicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. Category approach (literature value)
<b>Remarks</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	
<b>Reproductive toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): No indications that the substance causes adverse effects on reproductive organs. Category approach (literature value)
<b>RemarksReproductive toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Based on available data, the classification criteria are not met.
<b>Teratogenicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Did not show teratogenic effects in animal experiments. Category approach (literature value)
<b>Remarks-Teratogenicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	
<b>Remarks</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): The substance or mixture is not classified as specific target organ toxicant, single exposure.
<b>STOT - repeated exposure</b>	
<b>Remarks</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
<b>Repeated dose toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Rat; Oral; 2 years NOAEL: 50 mg/kg (based on body weight and day) Target Organs: Heart, Liver, Kidney Symptoms: reduced body weight gain, increased relative organ weights Category approach (literature value)
<b>Aspiration hazard</b>	
<b>Aspiration toxicity</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Not applicable
<b>Toxicological information</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Toxicokinetics Category approach The substance is expected to be rapidly absorbed and excreted. (literature value)



**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

<b>Toxicity to fish</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): No data available
<b>Toxicity to daphnia and other aquatic invertebrates</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): No data available
<b>Toxicity to aquatic plants</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): EC50 (72 h) <i>Desmodesmus subspicatus</i> (green algae): > 1 - 10 mg/l ; static test; OECD Test Guideline 201; own test results/literature values Category approach  Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): EC10 (72 h) <i>Desmodesmus subspicatus</i> (green algae): > 0,1 - 1 mg/l ; Growth rate; (literature value)
<b>Toxicity to bacteria</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): EC50 activated sludge: 140 mg/l; Respiration inhibition Category approach (literature value)
<b>Toxicity to soil dwelling organisms</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): NOEC <i>Eisenia foetida</i> : 220 mg/kg; reproduction rate; artificial soil Category approach (literature value)
<b>Toxicity to terrestrial flora</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): emergence, growth; NOEC: 10 mg/kg; <i>Lepidium sativum</i> (cress); OECD Test Guideline 208 own test results/literature values Category approach
<b>Toxicity for other terrestrial non-mammalian fauna</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): No data available

**12.2 Persistence and degradability**

<b>Biodegradability</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B own test results/literature values Category approach  Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Biodegradable; > 60 %; 60 d; anaerobic; OECD 311 or equivalent test method own test results/literature values Category approach
-------------------------	---

**12.3 Bioaccumulative potential**

<b>Bioaccumulation</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Bioaccumulation is unlikely. (literature value)
------------------------	---

**12.4 Mobility in soil**

<b>Mobility</b>	Alcohols, C12-14, ethoxylated ( $\geq 2.5$ EO): Koc: > 5000; calculated immobile strong adsorption to soil (literature value)
-----------------	---

**12.5 Results of PBT and vPvB assessment**

<b>Results of PBT assessment</b>	This substance/mixture contains no components considered to be either persistent,
----------------------------------	---

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**Results of PBT assessment**

bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Alcohols, C12-14, ethoxylated ( $\geq 2.5$  EO):  
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).  
Category approach

**12.6 Other adverse effects****General advice**

Alcohols, C12-14, ethoxylated ( $\geq 2.5$  EO):  
Harmful to aquatic life with long lasting effects.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Can be incinerated, when in compliance with local regulations.

**waste code of the European Union: EWC**

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**

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

---

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

**14.5 Environmental hazards**

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

**14.6 Special precautions for user**

Not classified as dangerous in the meaning of transport regulations.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Remarks	No information available.
---------	---------------------------

---

**SECTION 15: REGULATORY INFORMATION**

---

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

Occupational restrictions	Employment restrictions for children and young workers in accordance with Directive 94/33/EC and the respective national provisions are to be observed.
---------------------------	---

**NATIONAL/OTHER REGULATIONS**

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

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

**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 (IECSC)	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****Alcohols, C12-14 (even numbered), ethoxylated (CAS: 68439-50-9)**

A Chemical Safety Assessment is not required for this substance (exempted from obligation to register).

**SECTION 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

**Safety datasheet sections which have been updated:**

- 2. Hazards identification
- 3. Composition/information on ingredients
- 8. Exposure controls/personal protection

**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

**MARLIPAL 24/99**

Version: 9.03

Revision Date 14.03.2019

other materials or in any process, unless specified in the text.  
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

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