

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

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

Trade name	LIALET 111-10
Substance name (REACH / CLP)	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO)(CAS 127036-24-2)

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

Use	raw material for washing and cleaning agents Industrial use
Uses advised against	

1.3 Details of the supplier of the safety data sheet

Company	Sloveca, Sasol Slovakia, spol. s r.o. Mostová 2 811 02 Bratislava Slovak Republic Telephone: +421 2 54430219 Telefax: +421 2 54430315
Information (Product safety):	Telephone: +421 46 546 1204 Telefax: +421 46 546 1144
E-mail address	msds-info.italy@it.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+421 902 899981; +421 25 477 4166 National Toxicological Information Centre (24 hours)
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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.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Hazard pictograms****Signal word** Danger**Hazard statements**
H302 Harmful if swallowed.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

H318	Causes serious eye damage.
Precautionary statements	
P264	Wash face, hands and any exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330	Rinse mouth.

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
Undecanol, branched and linear, ethoxylated (>= 2.5 EO)

content: >= 90 - <= 100 %	component type: Active ingredient
EC-No.: 603-182-5	Index-No.:
REACH No.: Not relevant (polymer)	CAS-No.: 127036-24-2
Substance name (REACH / CLP): Undecanol, branched and linear, ethoxylated (>= 2.5 EO)(CAS: 127036-24-2)	
Classification (Regulation (EC) No 1272/2008):	Acute Tox. 4 (Oral) H302 Eye Dam. 1 H318

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

Other data Description synonyme: Undecan-1-ol, ethoxylated; CAS-No.: 34398-01-1

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	If you feel unwell, seek medical advice (show the label where possible).
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 immediately with plenty of water. Consult a physician if necessary.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed Symptoms: No information available.
Risks: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Indication of any immediate medical attention and special treatment needed Treatment: No information available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Water spray, Dry powder, Foam, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting Dangerous gases or fumes may occur in case of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information Standard procedure for chemical fires.

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 Use mechanical handling equipment. The material taken up must be disposed of in accordance with regulations.

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.

Advice on protection against Provide sufficient air exchange and/or exhaust in work rooms.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

fire and explosion	Keep away from heat and sources of ignition.
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	Keep tightly closed in a dry and cool place.
Storage class (TRGS 510)	11: Combustible Solids
Other data	Stable at normal ambient temperature and pressure.

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

DERIVED NO EFFECT LEVEL (DNEL)**Substance name: Undecanol, branched and linear, ethoxylated (>= 2.5 EO)(CAS: 127036-24-2)**

No data available

PREDICTED NO EFFECT CONCENTRATION (PNEC)**Substance name: Undecanol, branched and linear, ethoxylated (>= 2.5 EO)(CAS: 127036-24-2)**

No data available

8.2 Exposure controls**ENGINEERING MEASURES**

If possible, use material transfer/filling, metering and blending plants that are closed.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where dust, fibres and smoke occur, use self-contained breathing apparatus or breathing apparatus with a type P2 or P3 filter, in compliance with EN 143. No personal respiratory protective equipment normally
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LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

Hand protection	<p>required.</p> <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>gloves suitable for permanent contact: Material: butyl-rubber Break through time: >= 480 min Layer thickness: >= 0,7 mm</p> <p>gloves suitable for splash protection: Material: Nitrile rubber/nitrile latex Break through time: >= 30 min Layer thickness: >= 0,4 mm</p>
Eye protection	Tightly fitting safety goggles, Safety glasses with side-shields
Skin and body protection	Protective suit
Hygiene measures	Avoid contact with eyes. General industrial hygiene practice. 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.
Protective measures	Avoid contact with eyes. Wear suitable gloves and eye/face protection.

ENVIRONMENTAL EXPOSURE CONTROLS

General advice	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	solid; 25 °C; 1.013 hPa
Form	pasty
Colour	white
Odour	characteristic
Odour Threshold	No valid method available
pH	5 - 7; 5 % active substance; 25 °C; STN EN 1262
Pour point	15 - 20 °C; 1.013 hPa; STN 65 6072
Boiling Point	No data available
Flash point	> 125 °C; 1.013 hPa; ASTM D 93
Evaporation rate	No data available

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

Flammability (solid, gas)	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Density	ca.0,996 g/cm ³ ; 50 °C; 1,013 hPa; STN EN ISO 12185
Relative density	No data available
Bulk density	No data available
Water solubility	25 °C; 1.013 hPa; estimated; soluble
Partition coefficient: n-octanol/water	Not applicable Justification: surface-active substance
Ignition temperature	No data available
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	ca. 26,0 mPas; 50 °C; STN EN ISO 3104
Viscosity, kinematic	ca. 26,2 mm ² /s; 50 °C; (calculated)
Explosive properties	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

None known.

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity**

Note Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Note No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions None known.

10.4 Conditions to avoid

Conditions to avoid Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.

10.5 Incompatible materials to avoid

Materials to avoid Strong acids and oxidizing agents;

10.6 Hazardous decomposition products

Hazardous decomposition products No decomposition if stored normally.

Thermal decomposition Hazardous decomposition products formed under fire conditions.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

SECTION 11: TOXICOLOGICAL INFORMATION

Undecanol, branched and linear, ethoxylated (≥ 2.5 EO):

The data in this chapter are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Test substance: Alcohols, C9-11, branched, ethoxylated

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): LD50 Rat: > 300 - 2.000 mg/kg Category approach own test results/literature values Harmful if swallowed.
Acute inhalation toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): No data available
Acute dermal toxicity	Undecanol, branched and linear, ethoxylated (≥ 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

Skin irritation	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Rabbit: not irritating own test results/literature values Category approach Based on available data, the classification criteria are not met.
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Serious eye damage/eye irritation

Eye irritation	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Rabbit: Irreversible effects on the eye own test results/literature values Category approach Causes serious eye damage.
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Respiratory or skin sensitisation

Sensitisation	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Maximisation Test Guinea pig: not sensitizing Category approach (literature value) Based on available data, the classification criteria are not met.
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Germ cell mutagenicity

Genotoxicity in vitro	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): In vitro tests did not show mutagenic effects Category approach own test results/literature values
Genotoxicity in vivo	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): In vivo tests did not show mutagenic effects Category approach (literature value)

Remarks	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Based on available data, the classification criteria are not met.
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Carcinogenicity

Carcinogenicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO):
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LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

	The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. Category approach (literature value)
Remarks	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Based on available data, the classification criteria are not met.
Reproductive toxicity	
Reproductive toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Animal testing did not show any effects on fertility. Category approach (literature value)
RemarksReproductive toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Based on available data, the classification criteria are not met.
Teratogenicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Did not show teratogenic effects in animal experiments. Category approach (literature value)
Remarks-Teratogenicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Based on available data, the classification criteria are not met.
STOT - single exposure	
Remarks	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Remarks	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	Undecanol, branched and linear, ethoxylated (≥ 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)
Aspiration hazard	
Aspiration toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Not applicable
Toxicological information	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Toxicokinetics Category approach The substance is expected to be rapidly absorbed and excreted. (literature value)

SECTION 12: ECOLOGICAL INFORMATION

Undecanol, branched and linear, ethoxylated (≥ 2.5 EO):

The data in this chapter are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

Test substance: Alcohols, C9-11, branched, ethoxylated

12.1 Toxicity

Toxicity to fish	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): LC50 (96 h) Cyprinus carpio (Carp): $> 10 - 100$ mg/l; flow-through test; OECD Test Guideline 203 own test results/literature values Category approach
Toxicity to fish - Chronic toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): NOEC Fish: $> 1 - 10$ mg/l own test results/literature values Category approach
Toxicity to daphnia and other aquatic invertebrates	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): EC50 (48 h) Daphnia magna (Water flea): $> 10 - 100$ mg/l; static test; OECD Test Guideline 202 own test results/literature values Category approach
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): NOEC (21 d) Daphnia (water flea): $> 1 - 10$ mg/l; own test results/literature values Category approach
Toxicity to aquatic plants	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): EC10 (72 h) algae: $> 1 - 10$ mg/l ; OECD Test Guideline 201; own test results/literature values Category approach
Toxicity to bacteria	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): EC50 activated sludge: 140 mg/l; Respiration inhibition Category approach (literature value)
Toxicity to soil dwelling organisms	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): NOEC Eisenia foetida: 220 mg/kg; reproduction rate; artificial soil Category approach (literature value)
Toxicity to terrestrial flora	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): emergence, growth; NOEC: 10 mg/kg; Lepidium sativum (cress); OECD Test Guideline 208 own test results/literature values Category approach
Toxicity for other terrestrial non-mammalian fauna	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): No data available

12.2 Persistence and degradability

Biodegradability	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Readily biodegradable.; > 60 %; 28 d; aerobic; OECD Test Guideline 301B own test results/literature values Category approach
	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Biodegradable; > 60 %; anaerobic; OECD 311 or equivalent test method Category approach

12.3 Bioaccumulative potential

Bioaccumulation	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Bioaccumulation is unlikely. (literature value)
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12.4 Mobility in soil

Mobility	Undecanol, branched and linear, ethoxylated (≥ 2.5 EO): Adsorption/Soil; Koc: 4246 - 11246; QSAR (literature value) immobile
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LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

strong adsorption to soil

12.5 Results of PBT and vPvB assessment

Results of PBT assessment Undecanol, branched and linear, ethoxylated (≥ 2.5 EO):
Based on available data, the classification criteria are not met.

12.6 Other adverse effects

General advice Undecanol, branched and linear, ethoxylated (≥ 2.5 EO):
None known.

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

Product Can be incinerated, when in compliance with local regulations.

waste code of the European Union: EWC The waste code must be determined in agreement with the regional waste disposal authority or company. A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose.

SECTION 14: TRANSPORT INFORMATION**14.1 UN number**

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

14.2 Proper shipping name

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

14.3 Transport hazard class

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

14.4 Packing group

ADR Not dangerous goods
RID Not dangerous goods

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

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

Other regulations This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	not listed (product or constituents are not 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**Undecanol, branched and linear, ethoxylated (>= 2.5 EO)(CAS: 127036-24-2)**

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.

Safety datasheet sections which have been updated:

- 15. Regulatory information
- 16. Other information

Further information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

LIALET 111-10

Version: 4.01

Revision Date 12.06.2019

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