

Version: 11.00 Revision Date 12.03.2019

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name n-Propanol

**REACH No.** 01-2119486761-29-0002

Substance name (REACH / CLP) Propan-1-ol

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

Use Industrial use

Uses advised against

1.3 Details of the supplier of the safety data sheet

Company Sasol Chemie GmbH & Co. KG

Anckelmannsplatz 1 20537 Hamburg Germany

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** solvents.germany.msds@de.sasol.com

1.4 Emergency telephone number

Emergency telephone number +44 (0)1235 239 670 (Europe, Israel, Africa, Americas)

+44 (0)1235 239 671 (Middle East, Arabic African countries)

+65 3158 1074 (Asia Pacific) +86 10 5100 3039 (China) +27 (0)17 610 4444 (South Africa) +61 (2)8014 4558 (Australia)

### **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1 Classification of the substance or mixture

# Classification (REGULATION (EC) No 1272/2008)

Flammable liquids Category 2 Highly flammable liquid and vapour.

Serious eye damage Category 1 (Eyes) Causes serious eye damage.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Category 3 (Central nervous system)

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Version: 11.00 Revision Date 12.03.2019

#### **Hazard pictograms**







Signal word Danger

**Hazard statements** 

H225 Highly flammable liquid and vapour.
 H318 Causes serious eye damage.
 H336 May cause drowsiness or dizziness.

**Precautionary statements** 

P243 Take precautionary measures against static discharge.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.

Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position

comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

#### 2.3 Other hazards

Vapours may form explosive mixture with air.

## **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

# propan-1-ol; n-propanol

content: <= 100 % component type: Active ingredient

**EC-No.**: 200-746-9 **Index-No.**: 603-003-00-0 **CAS-No.**: 71-23-8

**REACH No.**: 01-2119486761-29-0002

 Classification (Regulation (EC) No 1272/2008):
 Flam. Liq. 2
 H225

 Eye Dam. 1
 H318

 STOT SE 3
 H336

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



Version: 11.00 Revision Date 12.03.2019

General advice Take off contaminated clothing and shoes immediately.

If inhaled Move to fresh air.

In case of skin contact Wash off with plenty of water.

In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a

physician.

If swallowed Drink plenty of water. Do NOT induce vomiting. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and

effects, both acute and delayed

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: For specialist advice physicians should contact the Poisons Information

Service.

#### **SECTION 5: FIREFIGHTING MEASURES**

5.1 Extinguishing media

Suitable extinguishing media Water spray, Alcohol-resistant foam, Dry powder, Carbon dioxide (CO2) in

enclosed spaces

Unsuitable extinguishing media High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during

Vapours may form explosive mixtures with air.

firefighting

When fighting fires in enclosed spaces: caution, danger of suffocation!

5.3 Advice for firefighters

Special protective equipment

for firefighters

Wear self-contained breathing apparatus and protective suit.

**Further information** Use water spray to cool unopened containers.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Personal precautions Ensure adequate ventilation. Keep away from sources of ignition - No smoking.

**Special precautions** Remove all sources of ignition.

6.2 Environmental precautions

**Environmental precautions** Do not flush into surface water or sanitary sewer system.

Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal

binder, sawdust).

6.4 Reference to other sections



Version: 11.00 Revision Date 12.03.2019

For personal protection see section 8.

# **SECTION 7: HANDLING AND STORAGE**

7.1 Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

Vapours are heavier than air and may spread along floors.

Advice on protection against

fire and explosion

Keep away from sources of ignition - No smoking. Vapours may form explosive mixtures with air. Do not allow to enter drains (danger of explosion). Take precautionary measures against static discharges.

Temperature class T2

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 container tightly closed. Store between 5 and 25 °C in a dry, well ventilated

place away from sources of heat, ignition and direct sunlight.

**Advice on common storage** Keep away from oxidizing agents, strongly acid or alkaline materials and amines.

Storage class (TRGS 510) 3: Flammable Liquids

Storage temperature  $5 - 25 \, ^{\circ}\text{C}$ 

container material suitable materials: Stainless steel

unsuitable materials: Aluminium

7.3 Specific end use(s)

Specific use(s) Consult the technical guidelines for the use of this substance/mixture.

#### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1 Control parameters

## COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

# National occupational exposure limits

Control parameters / Substance name	Тур	Control parameters	Update	Basis
N-PROPANOL (N-PROPYL ALCOHOL)	TWA	100 ppm	2009	ACGIH
N-PROPYL ALCOHOL	REL REL	500 mg/m3 200 ppm	2005 2005	NIOSH Pocket Guide to Chemical Hazards
N-PROPYL ALCOHOL	STEL STEL	625 mg/m3 250 ppm	2005 2005	NIOSH Pocket Guide to Chemical Hazards
	Can be absorbed through the skin.			



Version: 11.00 Revision Date 12.03.2019

N-PROPYL ALCOHOL	PEL PEL	500 mg/m3 200 ppm	02 2006 02 2006	OSHA Table Z-1
N-PROPYL ALCOHOL	TWA TWA	500 mg/m3 200 ppm	1989 1989	OSHA Table Z-1-A
N-PROPYL ALCOHOL	STEL STEL	625 mg/m3 250 ppm	1989 1989	OSHA Table Z-1-A

#### **EUROPEAN OCCUPATIONAL EXPOSURE LIMITS**

No data available

# **DERIVED NO EFFECT LEVEL (DNEL)**

End Use	Exposure routes	Value	Note
Workers	dermal, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - systemic effects	1723 mg/m3	
	dermal, Acute/short-term exposure - local effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - local effects		Not relevant / not applicable
	dermal, long-term exposure - systemic effects	136 mg/kg Body weight/day	
	Inhalation, long-term exposure - systemic effects	268 mg/m3	
	dermal, long-term exposure - local effects		Not relevant / not applicable
	Inhalation, long-term exposure - local effects		Not relevant / not applicable
Consumers	dermal, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - systemic effects	1036 mg/m3	
	Oral, Acute/short-term exposure - systemic effects		Not relevant / not applicable
	dermal, Acute/short-term exposure - local effects		Not relevant / not applicable
	Inhalation, Acute/short-term exposure - local effects		Not relevant / not applicable
	dermal, long-term exposure - systemic effects	81 mg/kg Body weight/day	
	Inhalation, long-term exposure - systemic effects	80 mg/m3	
	Oral, long-term exposure - systemic effects	61 mg/kg Body weight/day	
	dermal, long-term exposure - local effects		Not relevant / not applicable
	Inhalation, long-term exposure - local effects		Not relevant / not applicable



Version: 11.00 Revision Date 12.03.2019

#### PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: propan-1-ol; n-propanol			
Environmental Compartment	Value	Note	
Fresh water	10 mg/l		
Marine water	1 mg/l		
intermittent release	10 mg/l		
treatment plant	96 mg/l		
Fresh water sediment	22,8 mg/kg	based on dry weight	
Marine sediment	2,28 mg/kg	based on dry weight	
Soil	2,2 mg/kg	based on dry weight	
food		Not relevant / not applicable	

#### 8.2 Exposure controls

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection

No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

Hand protection

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

#### gloves suitable for permanent contact:

Material: butyl-rubber

Break through time: >= 480 min Layer thickness: 0,5 mm

Material: Nitrile rubber/nitrile latex Break through time: >= 480 min Layer thickness: 0,35 mm

# gloves suitable for splash protection:

Material: Polychloroprene Break through time: >= 120 min Layer thickness: 0,5 mm

unsuitable gloves

Material: Natural rubber/natural latex, Polyvinylchloride

**Eye protection** Tightly fitting safety goggles

**Skin and body protection** Wear suitable protective equipment.

**Hygiene measures** Take off all contaminated clothing immediately.



Version: 11.00 Revision Date 12.03.2019

Protective measures Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist.

#### **ENVIRONMENTAL EXPOSURE CONTROLS**

**General advice** Do not flush into surface water or sanitary sewer system.

Do not allow material to contaminate ground water system.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1 Information on basic physical and chemical properties

Physical state liquid; 20 °C; 1.013 hPa

Form liquid

Colour colourless

Odour alcohol-like

Odour Threshold No valid method available

pH No data available

Melting point/range -127,5 °C; 1.013 hPa

Boiling point/boiling range 97 °C; 1.013 hPa

Flash point 24 °C; 1.013 hPa; closed cup

Evaporation rate No data available
Flammability (solid, gas) not applicable (liquid)

28,2 hPa; 25 °C

Relative vapour density 2,1

Relative vapour density 1,02; 20 °C

**Density** 0,8037 g/cm3; 20 °C

Solubility/qualitative miscible with most organic solvents

Water solubility completely miscible

1.000 g/l; 25 °C

Partition coefficient: n-

octanol/water

log Pow: 0,2; 25 °C

Ignition temperature371 °C; 1.013 hPaAuto-ignition temperature400 °C; 1.013 hPaViscosity, dynamic2,3 mPas; 20 °CExplosive propertiesNot explosive

Oxidizing properties not expected based on structure and functional groups

#### **EC-SAFETY DATA SHEET**



# **N-PROPANOL**

Version: 11.00 Revision Date 12.03.2019

9.2 Other data

Additional advice no data

#### **SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity

**Note** Reacts with the following substances:

Strong acids and oxidizing agents

10.2 Chemical stability

**Note** Stable under normal conditions.

10.3 Possibility of hazardous reactions

**Hazardous reactions** Vapours may form explosive mixture with air.

10.4 Conditions to avoid

**Conditions to avoid** Heat, flames and sparks.

Avoid temperatures above 35°C, direct sunlight and contact with sources of heat.

10.5 Incompatible materials to avoid

Materials to avoid Strong acids and oxidizing agents; Alkali metals; Aluminium; Iron; Amines

10.6 Hazardous decomposition products

Hazardous decomposition

products

None known.

Thermal decomposition No decomposition if used as directed.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1 Information on toxicological effects

**Acute toxicity** 

Acute oral toxicity propan-1-ol; n-propanol:

LD50 Rat: > 5.000 mg/kg; OECD Test Guideline 401

(literature value)

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

Acute inhalation toxicity propan-1-ol; n-propanol:

LC50 Rat: > 20 mg/l; 4 h; OECD Test Guideline 403

(literature value)

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

Acute dermal toxicity propan-1-ol; n-propanol:

LD50 Rabbit: > 2.000 - 5.000 mg/kg; OECD Test Guideline 402

(literature value)

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

Skin corrosion/irritation

**Skin irritation** propan-1-ol; n-propanol:

Rabbit: not irritating; OECD Test Guideline 404

(literature value)



Version: 11.00 Revision Date 12.03.2019

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

Serious eye damage/eye irritation

**Eye irritation** propan-1-ol; n-propanol:

Rabbit: Risk of serious damage to eyes.; OECD Test Guideline 405

(literature value)

Causes serious eye damage.

Respiratory or skin sensitisation

Sensitisation propan-1-ol; n-propanol:

Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406

(literature value)

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

Germ cell mutagenicity

**Genotoxicity in vitro** propan-1-ol; n-propanol:

In vitro tests showed mutagenic effects

(literature value)

**Remarks** propan-1-ol; n-propanol:

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

Carcinogenicity

**Carcinogenicity** propan-1-ol; n-propanol:

The substance has been shown to be not genotoxic, therefore it is not expected to

have a carcinogenic potential.

Reproductive toxicity

Reproductive toxicity propan-1-ol; n-propanol:

Rat; OECD Test Guideline 413

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

**Teratogenicity** propan-1-ol; n-propanol:

Rat; inhalation (vapour); OECD Test Guideline 414

Embryotoxic effects and adverse effects on the offspring were detected only at

high maternally toxic doses

(literature value)

Remarks-Teratogenicity propan-1-ol; n-propanol:

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

STOT - single exposure

Remarks propan-1-ol; n-propanol:

Inhalation

May cause drowsiness or dizziness.

(literature value)

STOT - repeated exposure

**Remarks** propan-1-ol; n-propanol:

The substance or mixture is not classified as specific target organ toxicant,

repeated exposure.

Repeated dose toxicity propan-1-ol; n-propanol:

Rat; inhalation (vapour); Subacute toxicity; NOAEC: 1000 ppm; OECD Test

Guideline 412 (literature value)

propan-1-ol; n-propanol:

Rat; inhalation (vapour); Subchronic toxicity; OECD Test Guideline 413

(literature value)

**Aspiration hazard** 



Version: 11.00 Revision Date 12.03.2019

> Aspiration toxicity propan-1-ol; n-propanol:

Not applicable

**Toxicological information** propan-1-ol; n-propanol:

**Toxicokinetics** 

The substance is readily absorbed through skin, intestinal tract and lungs.

The substance is uniformly distributed throughout the organism.

The substance is rapidly eliminated from the body.

#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1 Toxicity

Toxicity to fish propan-1-ol; n-propanol:

LC50 (96 h) Pimephales promelas (fathead minnow): > 100 mg/l; semi-static test;

OECD Test Guideline 203

(literature value)

**Toxicity to fish - Chronic** 

toxicity

propan-1-ol; n-propanol: The study is not necessary.

Toxicity to daphnia and other

aquatic invertebrates

propan-1-ol; n-propanol:

EC50 (48 h) Daphnia magna (Water flea): > 100 mg/l; static test; DIN 38412

(literature value)

Toxicity to daphnia and other

aquatic invertebrates - Chronic

toxicity

propan-1-ol; n-propanol: NOEC (21 d) Daphnia magna (Water flea): > 100 mg/l; reproduction rate; semi-

static test; OECD Test Guideline 211; (literature value)

Test substance: Isopropanol

Toxicity to aquatic plants propan-1-ol; n-propanol:

EC50 (48 h) Pseudokirchneriella subcapitata (microalgae): > 100 mg/l; Growth

rate; static test; (literature value)

Toxicity to bacteria propan-1-ol; n-propanol:

IC50 (3 h) activated sludge, domestic: > 1.000 mg/l; static test

(literature value)

Toxicity to soil dwelling

organisms

propan-1-ol; n-propanol: The study is not necessary.

Justification:

Bioaccumulation is unlikely. Readily biodegradable. Not expected to adsorb on soil.

Toxicity to terrestrial flora propan-1-ol; n-propanol:

Growth inhibition; EC50 (7 d): > 500 mg/kg; Triticum aestivm (wheat)

(literature value)

Toxicity for other terrestrial non-mammalian fauna

propan-1-ol; n-propanol: The study is not necessary.

Justification:

low bioaccumulation potential Unlikely to pose a hazard to birds.

12.2 Persistence and degradability

Biodegradability propan-1-ol; n-propanol:

Readily biodegradable.; aerobic; OECD Test Guideline 301D

(literature value)

12.3 Bioaccumulative potential



Version: 11.00 Revision Date 12.03.2019

**Bioaccumulation** propan-1-ol; n-propanol:

Bioconcentration factor (BCF): 0,88; calculated

Bioaccumulation is unlikely.

12.4 Mobility in soil

Mobility propan-1-ol; n-propanol

propan-1-ol; n-propanol: Adsorption/Soil; Koc: 4,291; log Koc: 0,633; calculated

Highly mobile in soils

Not expected to adsorb on soil.

12.5 Results of PBT and vPvB assessment

Results of PBT assessment propan-1-ol; n-propanol:

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

12.6 Other adverse effects

General advice propan-1-ol; n-propanol:

None known.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

**Product** Following pre-treatment and observing the regulations for hazardous wastes, it

must be taken to a permitted hazardous wastes landfill or hazardous wastes

incinerator.

Contaminated packaging Can be used after re-conditioning.

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.

#### **SECTION 14: TRANSPORT INFORMATION**

#### 14.1 UN number

ADR 1274
RID 1274
ADN 1274
IMDG 1274
ICAO/IATA 1274

# 14.2 Proper shipping name

ADR N-PROPANOL RID N-PROPANOL ADN N-PROPANOL IMDG N-PROPANOL ICAO/IATA N-PROPANOL

# 14.3 Transport hazard class

ADR 3



RID	3
ADN	3
IMDG	3
ICAO/IATA	3

#### 14.4 Packing group

**ADR** Ш RID Ш ADN Ш **IMDG** Ш ICAO/IATA Ш

#### 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

ADR	Hazard Identification Number	30
	Labels	3
	Tunnel restriction code	(D/E)
IMDG	Labels 3	

EmS Number 1 F-E EmS Number 2 S-D

ICAO/IATA Labels 3

# 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

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

## 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:: FLAMMABLE LIQUIDS; P5c

Qualifying quantity 1: 5.000 t; Qualifying quantity 2: 50.000 t;



Version: 11.00 Revision Date 12.03.2019

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

# propan-1-ol; n-propanol

A Chemical Safety Assessment has been carried out for this substance.

#### **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

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.

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



Version: 11.00 **Revision Date 12.03.2019** 

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 Derived No-Effect Level DNEL DSL Domestic Substances List EC... Effect concentration ... %

ENCS Existing Notified Chemical Substances (Japan) EWC European Waste Catalogue

IATA International Air Transport Association Intermediate Bulk Container IBC International Civil Aviation Organization ICAO

IMDG International Maritime Dangerous Goods IMO International Maritime Organization ISHL Industrial Safety and Health Law (Japan) ISO International Organization for Standardization International Union of Pure and Applied Chemistry IUAPC

KECI Korea Existing Chemicals Inventory

Lethal Concentration, ...% LC... 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 Predicted No-Effect Concentration **PNEC** 

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Règlement concernant le transport international ferroviaire de marchandises dangereuses

TG TRGS

Test Guideline Technische Regeln für Gefahrstoffe TSCA Toxic Substances Control Act vPvB very persistent, very bioaccumulative WGK Wassergefährdungsklasse

## **Annex**

Attachments to the safety data sheet and/or lists of the identified uses for the listed substances can be downloaded using the internet links below.

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/00000006975\_EN\_01.pdf