

Version: 6.05 **Revision Date 16.10.2019** 

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

1.1 Product identifier

Trade name Ethylenglykol TECHN. **REACH No.** 01-2119456816-28-0011

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

Use Industrial use

raw material for synthesis processes in the chemical industry

Solvent

ethane-1,2-diol

Uses advised against

1.3 Details of the supplier of the safety data sheet

Substance name (REACH / CLP)

Company SASOL Germany GmbH

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 msds-info.germany@de.sasol.com

1.4 Emergency telephone number

+ 49 (0) 23 65 - 49 22 32 **Emergency telephone number** 

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

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Harmful if swallowed. Acute toxicity Category 4 (Oral)

Specific target organ toxicity - repeated May cause damage to organs through prolonged or repeated exposure Category 2

exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms







Version: 6.05 Revision Date 16.10.2019

Signal word Warning

**Hazard statements** 

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements** 

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P501 Dispose of contents/ container to an approved waste disposal plant.

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

ethane-1,2-diol

#### 2.3 Other hazards

No information available.

### **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

#### ethanediol

content: >= 90 - <= 100 % component type: Active ingredient

EC-No.: 203-473-3 Index-No.: 603-027-00-1 CAS-No.: 107-21-1

**REACH No.**: 01-2119456816-28-XXXX

Substance name (REACH / CLP): ethane-1,2-diol

Classification (Regulation (EC) No 1272/2008): Acute Tox. 4 (Oral) H302 STOT RE 2 H373

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

# **SECTION 4: FIRST AID MEASURES**

#### 4.1 Description of first aid measures

General advice Take off all contaminated clothing immediately. If you feel unwell, seek medical

advice (show the label where possible).

If inhaled 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 with plenty of water.

In case of eye contact Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.



Version: 6.05 Revision Date 16.10.2019

If swallowed Call a physician immediately. Clean mouth with water and drink afterwards plenty

of water.

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

binder, sawdust).

6.4 Reference to other sections

For personal protection see section 8.

### **SECTION 7: HANDLING AND STORAGE**

# 7.1 Precautions for safe handling



Version: 6.05 Revision Date 16.10.2019

Advice on safe handling Wear personal protective equipment.

Avoid contact with skin and eyes.

Advice on protection against

fire and explosion

No special protective measures against fire required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas

and containers

Keep tightly closed. Keep in a dry place.

Storage class (TRGS 510) 10-13: German Storage Class 10 to 13

Other data Protect from frost, heat and sunlight.

container material unsuitable materials: Zinc

7.3 Specific end use(s)

Specific use(s) This information is not available.

### 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	
ethane-1,2-diol	OELV - 8 hrs (TWA)	10 mg/m3	2018-08-17	Ireland. Occupational Exposure Limits	
		Sk: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the bodyIndicative Occupational Exposure Limit Value			
ethane-1,2-diol	OELV - 15 min (STEL)	104 mg/m3	2018-08-17	Ireland. Occupational Exposure Limits	
	Sk: Substances which have the capacity to penetrate intact skin when they come is contact with it, and be absorbed into the bodyIndicative Occupational Exposure Lir Value				
ethane-1,2-diol	OELV - 8 hrs (TWA) OELV - 8 hrs (TWA)	52 mg/m3 20 ppm	2018-08-17 2018-08-17	Ireland. Occupational Exposure Limits	
	Sk: Substances which have the capacity to penetrate intact skin when they contact with it, and be absorbed into the bodyIndicative Occupational Expo Value				



Version: 6.05 Revision Date 16.10.2019

### **EUROPEAN OCCUPATIONAL EXPOSURE LIMITS**

Control parameters / Substance name	Тур	Control parameters	Update	Basis	
ethylene glycol	STEL STEL	104 mg/m3 40 ppm	2000-06-16 2000-06-16	EU. Annex of Directive 2000/39/EC establishing a first list of	
	skin: Identifie	skin: Identifies the possibility of significant uptake through the skinIndicative			
ethylene glycol	TWA TWA	52 mg/m3 20 ppm	2000-06-16 2000-06-16	EU. Annex of Directive 2000/39/EC establishing a first list of	
	skin: Identifies the possibility of significant uptake through the skinIndicative				

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

Substance name: ethane-1,2-diol				
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		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	106 mg/kg	based on body weight and day	
	Inhalation, long-term exposure - systemic effects		Not relevant / Not applicable	
	dermal, long-term exposure - local effects		Not relevant / Not applicable	
	Inhalation, long-term exposure - local effects	35 mg/m3		
Consumers	dermal, Acute/short-term exposure - systemic effects		Not relevant / Not applicable	
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant / Not applicable	
	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	53 mg/kg	based on body weight and day	
	Inhalation, long-term exposure - systemic effects		Not relevant / Not applicable	



Version: 6.05 Revision Date 16.10.2019

Oral, long-term exposure - systemic effects		Not relevant / Not applicable
dermal, long-term exposure - local effects		Not relevant / Not applicable
Inhalation, long-term exposure - local effects	7 mg/m3	

### PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: ethane-1,2-diol			
Environmental Compartment	Value	Note	
Fresh water	10 mg/l		
Marine water	1 mg/l		
intermittent release	10 mg/l		
Sewage treatment plant	199,5 mg/l		
Fresh water sediment	37 mg/kg	based on dry weight	
Marine sediment	3,7 mg/kg	based on dry weight	
Soil	1,53 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: Nitrile rubber/nitrile latex Break through time: >= 480 min Layer thickness: 0,35 mm

Material: butyl-rubber

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

**Eye protection** Tightly fitting safety goggles

**Protective measures** Avoid contact with eyes. Wear suitable gloves and eye/face protection.



Version: 6.05 Revision Date 16.10.2019

### **ENVIRONMENTAL EXPOSURE CONTROLS**

General advice 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

Physical state liquid; 20 °C; 1.013 hPa

Form liquid
Colour clear
Odour very faint

Odour Threshold No valid method available.

pH 20 °C; neutral Melting point/range ca. -13 °C

Boiling point/boiling rangeca. 197 °C; 1.013 hPaFlash point111 °C; DIN 51758Evaporation rateNo data availableFlammability (solid, gas)not applicable (liquid)

Lower explosion limit 3,2 %(V)Upper explosion limit 53 %(V)

Vapour pressure ca. 0,1 hPa; 20 °C

Relative vapour density > 1

**Density** 1,113 g/cm3; 20 °C

Water solubility 20 °C; completely miscible

Partition coefficient: n-

octanol/water

log Pow: -1,36

Ignition temperature410 °C; DIN 51794Auto-ignition temperaturenot auto-flammableViscosity, dynamicNo data available

**Explosive properties** not expected based on structure and functional groups

Oxidizing properties No data available

### 9.2 Other data

None known.

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



Version: 6.05 Revision Date 16.10.2019

10.1 Reactivity

Note Stable

10.2 Chemical stability

Note Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions None known.

10.4 Conditions to avoid

Conditions to avoid None known.

10.5 Incompatible materials to avoid

Materials to avoid Oxidizing agents;

10.6 Hazardous decomposition products

Hazardous decomposition

products

No decomposition if stored normally.

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

#### 11.1 Information on toxicological effects

**Acute toxicity** 

Acute oral toxicity ethanediol:

LD50 Rat: > 2.000 mg/kg

(literature value)

Acute inhalation toxicity ethanediol:

LC50 Rat: > 1 - 5 mg/l; 6 h

(literature value)

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

Acute dermal toxicity ethanediol:

LD50 Mouse: > 2.000 mg/kg;

(literature value)

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

Human experience -

ethanediol:

Ingestion

Harmful if swallowed. (literature value)

Skin corrosion/irritation

Skin irritation ethanediol:

Rabbit: not irritating (literature value)

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

Serious eye damage/eye irritation

**Eye irritation** ethanediol:

Rabbit: not irritating (literature value)

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

Respiratory or skin sensitisation



Version: 6.05 Revision Date 16.10.2019

Sensitisation ethanediol:

Maximisation Test Guinea pig: not sensitizing

(literature value)

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

Germ cell mutagenicity

Genotoxicity in vitro ethanediol:

In vitro tests did not show mutagenic effects

(literature value)

Genotoxicity in vivo ethanediol:

In vivo tests did not show mutagenic effects

(literature value)

Remarks ethanediol:

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

Carcinogenicity

Carcinogenicity ethanediol:

Mouse; oral feed; 2 years; NOAEL: 1.500 mg/kg bw/day In this study no cancerogenic effects were observed.

(literature value)

Remarks ethanediol:

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

Reproductive toxicity

Reproductive toxicity ethanediol:

Rat; Oral

NOAEL ((parents)): 1.000 mg/kg (based on body weight and day) NOAEL (F1): 1.000 mg/kg (based on body weight and day) NOAEL (F2): 1.000 mg/kg (based on body weight and day)

(literature value)

RemarksReproductive

toxicity

ethanediol:

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

Teratogenicity ethanediol:

Rabbit; Oral

NOAEL: 2.000 mg/kg (based on body weight and day)

NOAEL (pregnant female): 1.000 mg/kg (based on body weight and day)

(literature value)

Remarks-Teratogenicity ethanediol:

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

STOT - single exposure

Remarks ethanediol:

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

exposure.

STOT - repeated exposure

Remarks ethanediol:

Ingestion; Target Organs: Kidney

May cause damage to organs through prolonged or repeated exposure.

(literature value)

Repeated dose toxicity ethanediol:

Rat; Oral; Subchronic toxicity

NOAEL: 150 mg/kg (based on body weight and day); OECD Test Guideline 408

Target Organs: Kidney (literature value)

ethanediol:

Dog; Dermal; Subacute toxicity

NOAEL: 2.220 mg/kg (based on body weight and day); OECD Test Guideline 410



Version: 6.05 Revision Date 16.10.2019

Target Organs: Kidney (literature value)

**Aspiration hazard** 

Aspiration toxicity ethanediol:

Not applicable

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

12.1 Toxicity

Toxicity to fish ethanediol:

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

(literature value)

Toxicity to fish - Chronic

toxicity

ethanediol:

NOEC (7 d) Pimephales promelas (fathead minnow): > 100 mg/l

(literature value)

Toxicity to daphnia and other

aquatic invertebrates

ethanediol:

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

Guideline 202 (literature value)

Toxicity to daphnia and other

aquatic invertebrates - Chronic

toxicity

ethanediol: NOEC (7 d) Ceriodaphnia sp.: > 100 mg/l; reproduction rate; Fresh water

(literature value)

Toxicity to aquatic plants ethanediol:

EC50 (96 h) Pseudokirchneriella subcapitata (microalgae): > 100 mg/l; static test;

(literature value)

Toxicity to bacteria ethanediol:

EC20 (30 min) activated sludge, domestic: > 1.995 mg/l; Respiration inhibition; ISO

8192

Category approach (literature value)

Toxicity to soil dwelling

organisms

ethanediol:

The study is not necessary.

Justification:

Readily biodegradable.

Direct exposure to soil is unlikely.

Toxicity to terrestrial flora ethanediol:

The study is not necessary.

Justification: Readily biodegradable.

Direct exposure to soil is unlikely.

Toxicity for other terrestrial

non-mammalian fauna

ethanediol:

The study is not necessary.

Justification:

Readily biodegradable.

Direct exposure to soil is unlikely.

Accumulation in terrestrial organisms is unlikely.

12.2 Persistence and degradability

**Biodegradability** ethanediol:

> 70 %; 28 d; aerobic; OECD Test Guideline 301A

(literature value)



Version: 6.05 Revision Date 16.10.2019

12.3 Bioaccumulative potential

**Bioaccumulation** ethanediol:

Bioaccumulation is unlikely.

12.4 Mobility in soil

Mobility ethanediol:

Adsorption/Soil; Medium: Soil; Koc: 1; calculated

Highly mobile in soils (literature value)

12.5 Results of PBT and vPvB assessment

Results of PBT 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.

Results of PBT assessment ethanediol:

This substance is not considered to be persistent, bioaccumulating and toxic

(PBT).

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

12.6 Other adverse effects

General advice ethanediol:

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

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



Version: 6.05 Revision Date 16.10.2019

#### 14.3 Transport hazard class

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

### 14.4 Packing group

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

#### 14.5 Environmental hazards

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

Ship type 3
Pollution category Y

Remarks MARPOL NAME: Ethylene glycol

### **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

**Directive 1999/13/EC (VOC)**The question whether this product or components thereof has/have to be

considered as volatile organic compound/compounds (VOC) as defined by Directive 1999/13/EU can only be answered when detailed knowledge on the use as solvent in connection with certain activities in certain facilities is available.



Version: 6.05 Revision Date 16.10.2019

### **NOTIFICATION STATUS**

Switzerland. Consolidated Inventory (based on EU-EINECS and EU-NLP)	CH INV	listed (product or constituents are listed)
Canadian Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Australia Inventory of Chemical Substances (AICS)	AICS	listed (product or constituents are listed)
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	listed (product or constituents are listed)
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	listed (product or constituents are listed)
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	listed (product or constituents are listed)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	listed (product or constituents are listed)
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC	listed (product or constituents are listed)
Taiwan Chemical Substance Inventory (TCSI)	TCSI	listed (product or constituents are listed)
United States TSCA Inventory	TSCA	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

### ethane-1,2-diol

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.

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

### Safety datasheet sections which have been updated:

- 8. Exposure controls/personal protection
- 11. Toxicological information
- 12. Ecological information
- 14. Transport information
- 15. Regulatory information

Further information: The information provided in this Safety Data Sheet is correct to the best of our



Version: 6.05 Revision Date 16.10.2019

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

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 ISHI 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, ...%

MARPOI International Convention

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

#### **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.

#### ethane-1,2-diol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/00000000123\_EN\_01.pdf