

Version: 8.00 Revision Date 2017/08/16

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

#### 1.1 Product identifier

Trade name DIETHANOLAMINE PURE

REACH No. 01-2119488930-28-0005

Substance name (REACH / CLP) 2,2'-iminodiethanol

### 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

anti-corrosion agent

raw material for gas scrubbers

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)

Skin irritation Category 2

Serious eye damage Category 1

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

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

exposure Category 2 expo

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



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#### **Hazard pictograms**







Signal word Danger

**Hazard statements** 

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

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.

P280 Wear protective gloves/ 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.

P314 Get medical advice/ attention if you feel unwell.

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

### 2.3 Other hazards

No hazards to be specially mentioned.

# **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

### 2,2'-iminodiethanol; diethanolamine

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

**EC-No.**: 203-868-0 **Index-No.**: 603-071-00-1 **CAS-No.**: 111-42-2

**REACH No.**: 01-2119488930-28-0005

Substance name (REACH / CLP): 2,2'-iminodiethanol

Classification (Regulation (EC) No 1272/2008): Acute Tox. 4 (Oral) H302
STOT RE 2 H373
Skin Irrit. 2 H315
Eye Dam. 1 H318

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

# **SECTION 4: FIRST AID MEASURES**



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4.1 Description of first aid measures

General advice Take off all contaminated clothing immediately. In the case of accident or if you

feel unwell, seek medical advice immediately (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 for at least 15 minutes. Take off all

contaminated clothing immediately. Consult a physician.

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

physician.

If swallowed Do NOT induce vomiting. Call a physician immediately.

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

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)

Unsuitable extinguishing media High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

Dangerous gases or fumes may occur in case of fire.

In case of fire hazardous decomposition products may be produced such as:

Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information Standard procedure for chemical fires. Cool closed containers exposed to fire with

water spray. In the event of fire and/or explosion do not breathe fumes. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local

regulations.

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

6.1 Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment. Ensure adequate ventilation.

**Special precautions** Forms slippery/greasy layers with water.

6.2 Environmental precautions



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**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 Confine any leaking material by inorganic, non-acidic, non-combustible, absorbing

material (e.g., sand, alkaline alumina, kieselguhr, vermiculite), take it up and store it in containers to be disposed of in compliance with local/national legal 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

fire and explosion

No special protective measures against fire required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from

and containers

frost, heat and sunlight.

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

container material suitable materials: Stainless steel, Stainless steel: 1.4541, 1.4571 (DIN);

X6CrNiTi18-10, X6CrNiMoTi17-12-2 (EN); 321, 316 Ti (AISI)

unsuitable materials: Light metals/light metal alloys, copper/copper alloys, 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

No data available

# **EUROPEAN OCCUPATIONAL EXPOSURE LIMITS**

No data available

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

Substance name: 2,2'-iminodiethanol				
End Use	Exposure routes	Value	Note	
Workers	dermal, Acute/short-term exposure - systemic effects		Not relevant / not applicable	



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	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	0.13 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	1 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	0.07 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects		Not relevant / not applicable
	Oral, long-term exposure - systemic effects	0.06 mg/kg	based on body weight and day
	dermal, long-term exposure - local effects		Not relevant / not applicable
	Inhalation, long-term exposure - local effects	0.25 mg/m3	

# PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: 2,2'-iminodiethanol				
Environmental Compartment	Value	Note		
Fresh water	0.02 mg/l			
Marine water	0.002 mg/l			
intermittent release	0.095 mg/l			
treatment plant	100 mg/l			
Fresh water sediment	0.092 mg/kg	based on dry weight		
Marine sediment	0.0092 mg/kg	based on dry weight		
Soil	0.00665 mg/kg	based on dry weight		
food	1.04 mg/kg			

### 8.2 Exposure controls



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#### PERSONAL PROTECTIVE EQUIPMENT

unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a combined

filter (e.g. 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

Skin and body protection Protective suit

Hygiene measures Take off all contaminated clothing immediately. Use barrier cream regularly.

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

eyes. General industrial hygiene practice.

### **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 solid; 20 °C; 1,013 hPa

Form Solid form
Colour colourless

Odourslight, ammoniacalOdour ThresholdNo data available

pH ca. 11; 20 g/l; 20 °C; (as aqueous solution)

Melting point/range ca. 27 °C; ISO 1218(E)

**Boiling point/boiling range** ca. 270 °C; 1,013 hPa; ASTM E 537-76; Thermal decomposition



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Flash point Not relevant / not applicable

Justification: Solid

relevant only to liquids and low melting point solids

**Evaporation rate** Not relevant / not applicable

Justification: Solid

Flammability (solid, gas) not auto-flammable

Lower explosion limit Not relevant / not applicable

Justification: Solid

Upper explosion limit Not relevant / not applicable

Justification: Solid

Vapour pressure ca. 0.01 hPa; 38 °C; ASTM D 2879-86

Relative vapour density Not relevant / not applicable, Justification: Solid

Density1.09 g/cm3; 30 °CRelative densityNo data availableWater solubilitycompletely miscible

Partition coefficient: n-

octanol/water

log Pow: -2.18; 25 °C; pH: 7.15; OECD Test Guideline 107

**Ignition temperature** ca. 370 °C; DIN 51794

Auto-ignition temperature Not applicable

solid with a melting point < 160°C

Viscosity, dynamic ca. 490 mPas; 30 °C

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 Incompatible with strong acids and oxidizing agents.

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 copper/copper alloys; non ferrous metals/non ferrous metal alloys; Nitrous acid and

other nitrosating agents; Vinyl compounds; Light metals/light metal alloys; Zinc;

Oxidizing agents



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#### 10.6 Hazardous decomposition products

Hazardous decomposition

No decomposition if stored normally.

products

Thermal decomposition Stable under normal conditions.

Hazardous decomposition products formed under fire conditions.

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

#### 11.1 Information on toxicological effects

**Acute toxicity** 

**Acute oral toxicity** 2,2'-iminodiethanol; diethanolamine:

LD50 Rat: > 300 - 2,000 mg/kg; OECD Test Guideline 401

Symptoms: Convulsions (literature value) Harmful if swallowed.

**Acute inhalation toxicity** 2,2'-iminodiethanol; diethanolamine:

LC0 Rat: 0.2 mg/l; 8 h (literature value)

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

Acute dermal toxicity 2,2'-iminodiethanol; diethanolamine:

study scientifically unjustified

Skin corrosion/irritation

**Skin irritation** 2,2'-iminodiethanol; diethanolamine:

Rabbit: irritating (literature value) Causes skin irritation.

Serious eye damage/eye irritation

**Eye irritation** 2,2'-iminodiethanol; diethanolamine:

Rabbit: highly irritating (literature value)

Causes serious eye damage.

Respiratory or skin sensitisation

**Sensitisation** 2,2'-iminodiethanol; diethanolamine:

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** 2,2'-iminodiethanol; diethanolamine:

In vitro tests did not show mutagenic effects

(literature value)

**Genotoxicity in vivo** 2,2'-iminodiethanol; diethanolamine:

In vivo tests did not show mutagenic effects

(literature value)

**Remarks** 2,2'-iminodiethanol; diethanolamine:

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

Carcinogenicity



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**Carcinogenicity** 2,2'-iminodiethanol; diethanolamine:

Rat; dermal; 2 years; 5 days/week; OECD Test Guideline 451

(literature value)

**Remarks** 2,2'-iminodiethanol; diethanolamine:

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

Reproductive toxicity

**Reproductive toxicity** 2,2'-iminodiethanol; diethanolamine:

Two-generation reproductive toxicity: Rat; Oral

NOAEL ((parents)): 300 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); OECD Test Guideline

416

(literature value)

The data are derived from the evaluations or test results achieved with similar

products (conclusion by analogy). Test substance: 2-aminoethanol

RemarksReproductive

toxicity

2,2'-iminodiethanol; diethanolamine:

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

**Teratogenicity** 2,2'-iminodiethanol; diethanolamine:

Rat; Ora

NOAEL: 50 mg/kg (based on body weight and day)

NOAEL (pregnant female): 50 mg/kg (based on body weight and day)

(literature value)

**Remarks-Teratogenicity** 2,2'-iminodiethanol; diethanolamine:

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

STOT - single exposure

**Remarks** 2,2'-iminodiethanol; diethanolamine:

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

exposure.

STOT - repeated exposure

**Remarks** 2,2'-iminodiethanol; diethanolamine:

Ingestion; Target Organs: Blood, Liver, Kidney

May cause damage to organs through prolonged or repeated exposure.

(literature value)

**Repeated dose toxicity** 2,2'-iminodiethanol; diethanolamine:

Rat; drinking water; Subchronic toxicity

LOAEL: 14 mg/kg (based on body weight and day); OECD Test Guideline 408

Target Organs: Kidney, Cardio-vascular system, Blood

(literature value)

**Aspiration hazard** 

**Aspiration toxicity** 2,2'-iminodiethanol; diethanolamine:

Not applicable

**Toxicological information** 2,2'-iminodiethanol; diethanolamine:

**Toxicokinetics** 

Absorption through skin is possible.

The substance is metabolised and excreted.

(literature value)



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

12.1 Toxicity

**Toxicity to fish** 2,2'-iminodiethanol; diethanolamine:

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

(literature value)

**Toxicity to fish - Chronic** 

aquatic invertebrates

toxicity

2,2'-iminodiethanol; diethanolamine: NOEC Fish: > 1 mg/l; QSAR

2,2'-iminodiethanol; diethanolamine:

EC50 (48 h) Ceriodaphnia dubia (water flea): > 10 - 100 mg/l; static test

(literature value)

Toxicity to daphnia and other aquatic invertebrates - Chronic

Toxicity to daphnia and other

toxicity

2,2'-iminodiethanol; diethanolamine:

EC10 (21 d) Daphnia magna (Water flea): > 1 mg/l; reproduction rate; semi-static

test; (literature value)

**Toxicity to aquatic plants** 2,2'-iminodiethanol; diethanolamine:

EC50 (72 h) Pseudokirchneriella subcapitata (microalgae): > 1 - 10 mg/l ; Growth

rate; static test; (literature value)

2,2'-iminodiethanol; diethanolamine: EC10 (72 h) Pseudokirchneriella subcapitata (green algae): > 1 mg/l; Growth rate;

static test

**Toxicity to bacteria** 2,2'-iminodiethanol; diethanolamine:

EC10 (30 min) activated sludge, domestic: > 1,000 mg/l; static test; OECD Test

Guideline 209

Toxicity to soil dwelling

organisms

2,2'-iminodiethanol; diethanolamine:

EC50 (63 d) Eisenia andrei: 776 mg/kg; reproduction rate

(literature value)

2,2'-iminodiethanol; diethanolamine:

LC50 (35 d) Eisenia andrei: > 1,000 mg/kg; reproduction rate

(literature value)

**Toxicity to terrestrial flora** 2,2'-iminodiethanol; diethanolamine:

emergence, growth; EC50: > 1,000 mg/kg; Medicago sativa (Alfalfa)

(literature value)

Toxicity for other terrestrial non-mammalian fauna

2,2'-iminodiethanol; diethanolamine:

The study is not necessary.

Justification:

Accumulation in terrestrial organisms is unlikely.

Readily biodegradable.

Direct exposure to soil is unlikely.

Studies on birds do not need to be conducted due to large mammalian dataset.

12.2 Persistence and degradability

**Biodegradability** 2,2'-iminodiethanol; diethanolamine:

rapidly biodegradable; > 60 %; 28 d; aerobic; OECD Test Guideline 301F

(literature value)

12.3 Bioaccumulative potential

**Bioaccumulation** 2,2'-iminodiethanol; diethanolamine:

Bioaccumulation is unlikely.

12.4 Mobility in soil

**Mobility** 2,2'-iminodiethanol; diethanolamine:

Adsorption/Soil; Medium: Soil; Koc: 1; log Koc: 0; calculated

(literature value) Highly mobile in soils

Not expected to adsorb on soil.



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#### 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** 2,2'-iminodiethanol; diethanolamine:

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** 2,2'-iminodiethanol; diethanolamine:

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

# 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



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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: Diethanolamine

# **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



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### **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	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

#### 2,2'-iminodiethanol

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.
H315 Causes skin irritation.
H318 Causes serious eye damage.

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

### Safety datasheet sections which have been updated:

- 2. Hazards identification
- 3. Composition/information on ingredients
- 7. Handling and storage
- 8. Exposure controls/personal protection
- 12. Ecological information
- 14. Transport information

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



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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, ...%

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.

#### 2,2'-iminodiethanol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/0000000051\_EN\_02.pdf