MONOISOPROPANOLAMINE

Version: *11*.01 **Revision Date 01.03.2019**

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

1.1 Product identifier

Trade name	**MONOISOPROPANOLAMINE**
REACH No.	01-2119475331-43-0002
Substance name (REACH / CLP)	1-aminopropan-2-ol

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

Use	Industrial use 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)

Skin corrosion Category 1B	Causes severe skin burns and eye damage.
Acute toxicity Category 4 (Dermal)	Harmful in contact with skin.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word Danger

Hazard statements

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

Precautionary statements

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
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

1-aminopropan-2-ol; isopropanolamine

component type: Active ingredient

EC-No.: 201-162-7 **Index-No.:** 603-082-00-1 **CAS-No.:** 78-96-6
REACH No.: 01-2119475331-43-0002
Substance name (REACH / CLP): 1-aminopropan-2-ol

Classification (Regulation (EC) No 1272/2008):	Skin Corr. 1B	H314
	Acute Tox. 4	H312

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. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Remove from exposure, lie down. Give oxygen or artificial respiration if needed.
If inhaled	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Call a physician immediately.
In case of skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. Consult a physician.

In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Call a physician immediately.
If swallowed	Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person.

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, Carbon dioxide (CO2), Alcohol-resistant foam
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. Exposure to decomposition products may be a hazard to health. Closed container may rupture if strongly heated.
Hazardous combustion products	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Protective suit
Further information	Standard procedure for chemical fires. 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. Cool closed containers exposed to fire with water spray. Remove unnecessary personnel from the danger area.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

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	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal

according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal. The material taken up must be disposed of in accordance with regulations. Clean contaminated surface thoroughly.

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	Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep container tightly closed. Keep in a cool, well-ventilated place.
Storage class (TRGS 510)	8AL: Combustible liquids, corrosive
Other data	Stable at normal ambient temperature and pressure.
container material	suitable materials: Stainless steel: 1.4541, 1.4571 (DIN); X6CrNiTi18-10, X6CrNiMoTi17-12-2 (EN); 321, 316 Ti (AISI), Stainless steel unsuitable materials: Zinc, Aluminium, copper/copper alloys, Light metals/light metal alloys

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: 1-aminopropan-2-ol			
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	8,5 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		Not relevant / not applicable
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	2,1 mg/kg	based on body weight and day
	Inhalation, long-term exposure - systemic effects	0,67 mg/m3	
	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		Not relevant / not applicable

PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance name: 1-aminopropan-2-ol		
Environmental Compartment	**Value**	**Note**
Fresh water	0,0327 mg/l	
Marine water	0,00327 mg/l	
intermittent release	0,327 mg/l	
treatment plant	3,3 mg/l	
Fresh water sediment	0,177 mg/kg	based on dry weight
Marine sediment	0,0177 mg/kg	based on dry weight
Soil	0,0161 mg/kg	based on dry weight
food		Not relevant / not applicable

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 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 **gloves suitable for splash protection:** Material: Natural rubber/natural latex Break through time: >= 240 min Layer thickness: 0,5 mm
Eye protection	Tightly fitting safety goggles
Skin and body protection	Protective suit, Safety shoes
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Use barrier cream regularly. Take off all contaminated clothing immediately. Do not breathe vapours or spray mist. Ensure adequate ventilation, especially in confined areas.
Protective measures	Wear suitable gloves and eye/face protection. Avoid contact with the skin and the eyes.

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	colourless

Odour	slight, ammoniacal
Odour Threshold	No valid method available
pH	ca. 12; 20 g/l; 20 °C
Melting point/range	ca. 2 °C
Boiling point/boiling range	ca. 159 °C; 1.013 hPa
Flash point	ca. 74 °C; DIN 51758
Evaporation rate	No data available
Flammability (solid, gas)	not applicable (liquid)
Lower explosion limit	2,2 %(V)
Upper explosion limit	12 %(V)
Vapour pressure	ca. 0,9 hPa; 20 °C
Relative vapour density	No data available
Density	ca.0,96 g/cm3; 20 °C
Relative density	No data available
Water solubility	20 °C; completely miscible
Partition coefficient: n-octanol/water	log Pow: -0,96
Ignition temperature	ca. 410 °C; DIN 51794
Auto-ignition temperature	not auto-flammable
Viscosity, dynamic	31,8 mPas; 20 °C
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

10.1 Reactivity

Note	Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Note	The product is chemically stable. No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	Incompatible with strong acids and oxidizing agents. Exothermic reaction with strong acids.

10.4 Conditions to avoid

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

10.5 Incompatible materials to avoid

Materials to avoid	non ferrous metals/non ferrous metal alloys; Nitrous acid and other nitrosating agents; Vinyl compounds; Light metals/light metal alloys; Zinc; Halogenated compounds; Acid anhydrides; Acid chlorides; Strong acids and oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products	Nitrogen oxides (NOx) Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke. Under unfavourable conditions and in combination with nitrosating agents (nitrites, nitrogen oxides) nitrosamines may form.
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	1-aminopropan-2-ol; isopropanolamine: LD50 Rat: > 2.000 - 5.000 mg/kg Symptoms: Convulsions (literature value) Based on available data, the classification criteria are not met.
Acute inhalation toxicity	1-aminopropan-2-ol; isopropanolamine: The study is not necessary.
Acute dermal toxicity	Acute toxicity estimate : 1.100 mg/kg; Calculation method
Acute dermal toxicity	1-aminopropan-2-ol; isopropanolamine: LD50 Rabbit: > 1.000 - 2.000 mg/kg; Target Organs: Skin Symptoms: Corrosion, Burn (literature value) Harmful in contact with skin.

Skin corrosion/irritation

Skin irritation	1-aminopropan-2-ol; isopropanolamine: Rabbit: Corrosive (literature value) Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Eye irritation	1-aminopropan-2-ol; isopropanolamine: Rabbit: Corrosive (literature value) Causes serious eye damage.

Respiratory or skin sensitisation

Sensitisation	1-aminopropan-2-ol; isopropanolamine: study scientifically unjustified

Germ cell mutagenicity

Genotoxicity in vitro	1-aminopropan-2-ol; isopropanolamine: In vitro tests did not show mutagenic effects

(literature value)

Genotoxicity in vivo
1-aminopropan-2-ol; isopropanolamine:
In vivo tests did not show mutagenic effects
(literature value)

Remarks
1-aminopropan-2-ol; isopropanolamine:
Based on available data, the classification criteria are not met.

Carcinogenicity

Carcinogenicity
1-aminopropan-2-ol; isopropanolamine:
The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential.

Reproductive toxicity

Reproductive toxicity
1-aminopropan-2-ol; isopropanolamine:
Rat; Oral; 38 days (male); 45 days (female)
NOAEL (F1): 1.000 mg/kg (based on body weight and day); OECD Test Guideline 422
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 1-aminopropan-2-ol hydrochloride

RemarksReproductive toxicity
1-aminopropan-2-ol; isopropanolamine:
Based on available data, the classification criteria are not met.

Teratogenicity
1-aminopropan-2-ol; isopropanolamine:
Rat; Oral
NOAEL: 1.000 mg/kg (based on body weight and day)
NOAEL (pregnant female): 1.000 mg/kg (based on body weight and day)
(literature value)
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 1-aminopropan-2-ol hydrochloride

Remarks-Teratogenicity
1-aminopropan-2-ol; isopropanolamine:
Based on available data, the classification criteria are not met.

STOT - single exposure

Remarks
1-aminopropan-2-ol; isopropanolamine:
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Remarks
1-aminopropan-2-ol; isopropanolamine:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity
1-aminopropan-2-ol; isopropanolamine:
Rat; Oral; Subacute toxicity
NOAEL: 1.000 mg/kg (based on body weight and day); OECD Test Guideline 422
literature value
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: 1-aminopropan-2-ol hydrochloride

Aspiration hazard

Aspiration toxicity
1-aminopropan-2-ol; isopropanolamine:
Not applicable

MONOISOPROPANOLAMINE

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	1-aminopropan-2-ol; isopropanolamine: LC50 (96 h) Leuciscus idus (Golden orfe): > 100 mg/l ; static test; DIN 38412 (literature value) In the range of water solubility not toxic under test conditions.
Toxicity to fish - Chronic toxicity	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Sufficient information is available to predict no toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates	1-aminopropan-2-ol; isopropanolamine: EC50 (48 h) Daphnia magna (Water flea): > 100 mg/l ; static test (literature value)
Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Sufficient information is available to predict no toxicity at the limit of solubility.
Toxicity to aquatic plants	1-aminopropan-2-ol; isopropanolamine: EC50 (72 h) Desmodesmus subspicatus (green algae): > 10 - 100 mg/l ; static test; (literature value)
Toxicity to bacteria	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Justification: Readily biodegradable.
Toxicity to soil dwelling organisms	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Justification: Readily biodegradable. Direct exposure to soil is unlikely.
Toxicity to terrestrial flora	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Justification: Readily biodegradable. Direct exposure to soil is unlikely.
Toxicity for other terrestrial non-mammalian fauna	1-aminopropan-2-ol; isopropanolamine: The study is not necessary. Justification: Studies on birds do not need to be conducted due to large mammalian dataset.

12.2 Persistence and degradability

Biodegradability	1-aminopropan-2-ol; isopropanolamine: Readily biodegradable.; > 60 %; 28 d; aerobic (literature value)

12.3 Bioaccumulative potential

Bioaccumulation	1-aminopropan-2-ol; isopropanolamine: Bioconcentration factor (BCF): 0,11; calculated Bioaccumulation is unlikely. (literature value)

12.4 Mobility in soil

Mobility	1-aminopropan-2-ol; isopropanolamine: Adsorption/Soil; Koc: 1,789; log Koc: 0,253; calculated (literature value) Highly mobile in soils Not expected to adsorb on soil.

12.5 Results of PBT and vPvB assessment

Results of PBT assessment	1-aminopropan-2-ol; isopropanolamine: 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	1-aminopropan-2-ol; isopropanolamine: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Can be incinerated, when in compliance with local regulations. Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal., Offer rinsed packaging material to local recycling facilities., Packaging that cannot be cleaned must be disposed of in the same way as the material itself.
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	2735
RID	2735
ADN	2735
IMDG	2735
ICAO/IATA	2735

14.2 Proper shipping name

ADR	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)
RID	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)
ADN	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)
IMDG	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)
ICAO/IATA	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)

14.3 Transport hazard class

ADR	8
RID	8
ADN	8
IMDG	8
ICAO/IATA	8

14.4 Packing group

ADR	II
RID	II
ADN	II
IMDG	II
ICAO/IATA	II

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	80
	Labels	8
	Tunnel restriction code	(E)
IMDG	Labels 8	
	EmS Number 1 F-A	
	EmS Number 2 S-B	
ICAO/IATA	Labels	8

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: Isopropanolamine

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

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

1-aminopropan-2-ol

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.

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

Safety datasheet sections which have been updated:

8. Exposure controls/personal protection
9. Physical and chemical properties
14. Transport 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.

MONOISOPROPANOLAMINE

Version: *11*.01 **Revision Date 01.03.2019**

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

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.

1-aminopropan-2-ol

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000000055_EN_01.pdf