2-Ethoxyethanol

128082-2.5L

SECTION 1. IDENTIFICATION

Product name	:	2-Ethoxyethanol
Number	:	000000020530
Product Use Description	:	Laboratory chemicals
Manufacturer or supplier's details	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 Seelze, 30926
For more information call	:	1-800-368-0050 +1-231-726-3171 (Monday-Friday, 9:00am-5:00pm)
In case of emergency call	:	**Medical: 1-800-498-5701 or +1-303-389-1414**
	:	**Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
	:	
	:	(24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form	:	liquid
Color	:	colourless
Odor	:	ether-like

Classification of the substance or mixture

Classification of the substance or mixture	:	Flammable liquids, Category 3 Acute toxicity, Category 4, Oral Acute toxicity, Category 3, Inhalation Reproductive toxicity, Category 1B

GHS Label elements, including precautionary statements

Symbol(s) :

Signal word	:	Danger
Hazard statements	:	Flammable liquid and vapour. Harmful if swallowed. Toxic if inhaled. May damage fertility or the unborn child.
Precautionary statements	:	**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face

protection.

Response:
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER /doctor.
Rinse mouth.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

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

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C4H10O2

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	100.00 %

SECTION 4. FIRST AID MEASURES

General advice	:	First aider needs to protect himself. Move out of dangerous area. Take off immediately all contaminated clothing.
Inhalation	:	If inhaled, remove to fresh air. Call a physician immediately.
Skin contact	:	After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.
Eye contact	:	Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses. Protect unharmed eye. Get medical attention immediately.
Ingestion	:	When swallowed, allow water to be drunk. Call a physician immediately.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Foam Carbon dioxide (CO2) Dry powder Dry sand
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	:	Flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Fire may cause evolution of: Carbon monoxide Carbon dioxide (CO2)

Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	:	Ventilate the area. Do not use sparking tools. Use explosion-proof equipment. 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).

SECTION 7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Wear personal protective equipment. Use only in well-ventilated areas.
Advice on protection against fire and explosion	:	Keep product and empty container away from heat and sources of ignition. No smoking. Take precautionary measures against static discharges.

Vapours may form explosive mixtures with air.

Storage

Conditions for safe storage, including any incompatibilities	:	Store in area designed for storage of flammable liquids. Protect from physical damage. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Protect from exposure to air/oxygen (peroxide formation).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures	:	Ensure that eyewash stations and safety showers are close to the workstation location. Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment. Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist.
Engineering measures	:	Use with local exhaust ventilation.
Eye protection	:	Safety glasses with side-shields
Hand protection	:	Impervious butyl rubber gloves Gloves must be inspected prior to use. Replace when worn.
Skin and body protection	:	Protective suit
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment.
Hygiene measures	:	Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. When using do not eat or drink.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	TWA : Time weighted average	(5 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	REL : Recommended exposure limit (REL):	1.8 mg/m3 (0.5 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	PEL : Permissible exposure limit	740 mg/m3 (200 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	TWA : Time weighted average	740 mg/m3 (200 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether)	110-80-5	SKIN_FINAL : Skin designation (Final Rule Limit applies):	Can be absorbed through the skin.	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Color	:	colourless
Odor	:	ether-like
pH	:	Note: neutral
setting point	:	-70 °C
Boiling point/boiling range	:	ca. 136 °C at 1,013 hPa
Flash point	:	104 °F (40 °C) at 1,013 hPa Method: closed cup
Lower explosion limit	:	1.8 %(V)

Upper explosion limit	:	15.7 %(V)
Vapor pressure	:	5.1 hPa at 20 °C(68 °F) 7.51 hPa at 25 °C(77 °F)
Vapor density	:	3.11 Note: (Air = 1.0)
Density	:	0.93 g/cm3 at 20 °C
Water solubility	:	Note: completely miscible
Partition coefficient: n-octanol/water	:	log Pow: 0.32
Ignition temperature	:	235 °C at 1,013 hPa
Decomposition temperature	:	Note: At normal pressure may be distilled without decomposition.
Viscosity, dynamic	:	1.84 mPa.s at 25 °C
Molecular weight	:	90.12 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under recommended storage conditions.

Possibility of hazardous reactions	:	Reacts with air to form peroxides. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents Copper
Hazardous decomposition products	:	Fire may cause evolution of: Carbon monoxide Carbon dioxide (CO2)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50: 3,000 mg/kg Species: Rat
	:	LD50: 1,400 mg/kg Species: Guinea pig
Acute inhalation toxicity	:	LC50: 7.36 mg/l , vapour Exposure time: 8 h Species: Rat
Acute dermal toxicity	:	LD50: 3,271 mg/kg Species: Rabbit
Skin irritation	:	Species: Rabbit Result: slight irritation Method: Tested according to Directive 92/69/EEC.
Eye irritation	:	Species: Rabbit

Result: slight irritation
Method: in vivo assay
Note: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Sensitisation : Maximisation Test
Species: Guinea pig
Result: non-sensitizing
Method: OECD Test Guideline 406

Genotoxicity in vitro : Note: Not classified due to data which are conclusive although insufficient for classification.

Genotoxicity in vivo : Test Method: Micronucleus test
Species: Mouse, male and female
Application Route: Intraperitoneal injection
Result: negative

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish : static test
LC50: > 10,000 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates : static test
EC50: > 10,000 mg/l
Exposure time: 24 h
Species: Daphnia magna (Water flea)

Toxicity to algae : static test
NOEC: > 1,000 mg/l

Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)

Toxicity to bacteria : EC0: > 10,000 mg/l
Exposure time: 24 h
Species: Pseudomonas putida
Method: DIN 38412

Elimination information (persistence and degradability)

Bioaccumulation : Note: no data available

Biodegradability : aerobic
Result: rapidly biodegradable
Value: 63 - 83 %
Method: OECD Test Guideline 301C

Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	:	UN 1171
	Proper shipping name	:	ETHYLENE GLYCOL MONOETHYL ETHER
	Class		3
	Packing group		III
	Hazard Labels		3
IATA	UN/ID No.	:	UN 1171
	Description of the goods	:	ETHYLENE GLYCOL MONOETHYL ETHER

	Class	:	3
	Packaging group	:	III
	Hazard Labels	:	3
	Packing instruction (cargo aircraft)	:	366
	Packing instruction (passenger aircraft)	:	355
	Packing instruction (passenger aircraft)	:	Y344
IMDG	UN/ID No.	:	UN 1171
	Description of the goods	:	ETHYLENE GLYCOL MONOETHYL ETHER
	Class	:	3
	Packaging group	:	III
	Hazard Labels	:	3
	EmS Number	:	F-E, S-D
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act	:	On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	:	On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	:	All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	:	On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	:	On the inventory, or in compliance with the inventory
Philippines. The Toxic	:	On the inventory, or in compliance with the inventory

Substances and Hazardous and Nuclear Waste Control Act		
China. Inventory of Existing Chemical Substances	:	On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	:	On the inventory, or in compliance with the inventory
TSCA 12B	:	US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) 2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302)	:	The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ): Reportable quantity: 1000 lbs
	:	2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5
SARA 302 Components	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5
SARA 311/312 Hazards	:	Fire Hazard
CERCLA Reportable Quantity	:	1000 lbs

California Prop. 65	:	**WARNING:**This product can expose you to chemicals, listed below, known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. 2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5
Massachusetts RTK	:	2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5
New Jersey RTK	:	2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5
Pennsylvania RTK	:	2-Ethoxyethanol (EGEE; Ethylene glycol monoethyl ether) 110-80-5

SECTION 16. OTHER INFORMATION

		HMIS III	NFPA
Health hazard	:	2*	1
Flammability	:	2	2
Physical Hazard	:	0	
Instability	:		0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

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. Final determination of suitability of any material is the sole responsibility of

the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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