SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name	**Ethylene glycol mono-tert-butyl ether/ ETB**
Chemical Name	2-(tert-butoxy)ethan-1-ol
CAS Number	7580-85-0
EC Number	616-267-7

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

Relevant identified uses	Solvent for paint and printing ink, cleaning products and surface coatings It is used in acrylic resin formulations, asphalt release agents, fire-fighting foam Also used in oil industry due to its surfactant properties
Uses identified against	Not for use other than those specified

1.3 Details of the supplier of the safety data sheet:

Manufacturer	Prasol Chemicals Pvt. Ltd., Prasol House, Plot No.A-17/2/3, T.T.C. Indl. Area, Khairne M.I.D.C., Navi Mumbai - 400 710. Maharashtra, India.
Telephone	+91-22-27782555
Telefax	+91-22-27782430
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22- 27782555
Language	English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Flammable Liquid	Category 3	H226	Flammable liquid and vapor
Skin Irritation	Category 2	H315	Causes skin irritation
Eye Irritation	Category 2	H319	Causes serious eye irritation
Specific Target Organ Toxicity	Category 3a	H335	May cause respiratory irritation.

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms

GHS02 GHS07 GHS08

Signal word Warning

Hazard statements

H226	Flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Precautionary statements

General	P103	Read label before use.
Prevention	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P233	Keep container tightly closed
	P240	Ground and bond container and receiving equipment
	P241	Use explosion - proof [electrical/ventilating/lighting/...] equipment
	P242	Use non-sparking tools
	P243	Take action to prevent static discharge
	P261	Avoid breathing fume/gas/mist/ vapours/spray
	P264	Wash hands thoroughly after handling.
	P271	Use only outdoors or in a well -ventilated area
	P280	Use protective gloves and eye protection.
Response	P302 + P352	IF ON SKIN: Wash with plenty of water and mild soap.
	P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse

		skin with water.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breath
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P312	Call a doctor if you feel unwell.
	P321	Specific treatment: Wash with plenty of water and seek medical advice if necessary.
	P332 + P313	If skin irritation occurs: Get medical advice.
	P337+P331	If eye irritation persists: Get medical advice.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	P370+P378	In case of fire: Use CO_2, dry powder, foam or water spray to extinguish.
Storage	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P403+P235	Store in a well-ventilated place. Keep cool.
	P405	Store locked up.
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of REACH regulation

SECTION 3: Composition/information on ingredients

3.1 Substances

Ingredient	**CAS No.**	**EC No.**	**Concentration (%)**
Ethylene glycol mono-tert-butyl ether/ ETB	7580-85-0	616-267-7	99 min

Additional information:

Molecular Formula	$C_6H_{14}O_2$
Molecular Weight	118.18

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	Take off all contaminated clothing immediately.
After inhalation	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention
After skin contact	Wash off with plenty of water immediately, seek medical advice if necessary.
After eye contact	Rinse with plenty of water immediately and seek medical advice.
After swallowing	Do not induce vomiting and seek medical advice immediately.
4.2 Most important symptoms and effects, both acute and delayed	General: Unconsciousness Dizziness Headache. In case of ingestion: Gastric and intestinal problems. After contact with skin: Irritant. After eye contact: Irritant.
4.3 Indication of any immediate medical attention and special treatment needed	Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	CO_2, dry powder, foam or water spray
Unsuitable extinguishing media	water jet
5.2 Special hazards arising from the substance or mixture	Flammable. Explosive mixtures with air may even form at room temperature. Beware of re-ignition Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may back-flash over great distances when ignited. Ignition by hot surfaces, sparks and open flames. May form toxic carbon oxides if case of fire.
5.3 Advice for firefighters	Do not expose to high temperature. Danger of bursting and explosion. Use fine water spray to cool endangered containers. Move undamaged containers from immediate hazard area. Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1	**Personal precautions, protective equipment and emergency procedures**	Remove persons not involved upwind. Wear a self-contained breathing apparatus and chemical protective clothing. Solvent-resistant protective clothing recommended.
6.2	**Environmental precautions**	Plug leak if safely possible. Do not allow to enter drains, surface waters, basements or pits. When released into the environment, alert police and fire brigade.
6.3	**Methods and material for containment and cleaning up**	In case of spills of large quantities: Dam spills and pump to remove. Explosion protection required. Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal.
6.4	**Reference to other sections**	Section 8 for information on personal protection equipment. Section 13 for disposal information

SECTION 7: Handling and storage

7.1	**Precautions for safe handling**	Provide adequate ventilation, and local exhaust as needed. Provide room air exhaust at ground level. Concentrated vapours are heavier than air. Avoid the formation of aerosol. Do not breathe vapours. Use only explosion-protected equipment/instruments. Do not use air pressure..
7.2	**Conditions for safe storage, including any incompatibilities**	
	Advice on protection against fire and explosion	Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharge. Beware of re-ignition. Potentially explosive mixture may form within partially empty containers. Emergency cooling must be provided for in case of a fire in the vicinity. Do not weld.
	Storage	Keep container dry. Keep container tightly closed in a cool, well-ventilated place. Protect from direct sunlight. Incompatible products: Acid catalysts (sulphuric acid, hydrochloric acid, oxalic acid), Iodine, Bases, Acetic anhydride, Hydrogen peroxide (concentrated solutions) Packaging material: Recommended: Stainless steel, Iron To be avoided: Plastic materials
	Advice on common storage	Observe prohibition against storing together!
	Storage class	3 Flammable liquids
	Storage stability	Stable under recommended storage conditions
7.3	**Specific end use(s)**	Solvent

SECTION 8: Exposure controls/personal protection

8.1	**Control parameters**	Exposure limits not determined
8.2	**Exposure controls**	
	Appropriate engineering controls	Explosion protection required. Provide good ventilation and/or an exhaust system in the work area.
	Personal protective equipment	
	Eye/ face protection	closed goggles, face shield
	Skin protection	
	Hand protection	Butyl-rubber 0.5 mm > 480 min
	Body protection	Use solvent-resistant protective clothing. Flame-retardant antistatic protective clothing; safety shoes
	Respiratory protection	Respiratory equipment with suitable filter or a self-contained respiratory apparatus.
	Thermal hazards	Flammable liquid; do not expose to heat
	Industrial hygiene	Do not inhale vapours / aerosols. Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Use disposable clothing if appropriate. Smoking, eating and drinking should be prohibited in the application area.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Colourless liquid
Odour	no data available
Odour threshold	no data available
pH	not determined (does not liberate H ions when dissolved)
Melting point	no data available
Boiling point	152°C
Flash point	55°C (Closed cup)
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	0.9 at 20°C
Solubility in water	fully miscible at 20°C
Partition coefficient	log Kow (n-octanol/water) 0.36 at 25°C
Ignition temperature	no data available
Decomposition temperature	no data available
Viscosity at 20 °C	no data available
Explosive properties	No explosive properties.
Oxidizing properties	no oxidizing properties

9.2 Other information no further information

SECTION 10: Stability and reactivity

10.1	**Reactivity**	Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may back-flash over great distances when ignited. May become electrostatically charged.
10.2	**Chemical stability**	Under storage at normal ambient temperatures (-40°C to +40°C), the product is stable.
10.3	**Possibility of hazardous reactions**	No known hazardous reactions if used as directed
10.4	**Conditions to avoid**	Flammable. Concentrated vapours are heavier than air. Forms explosive mixtures with air, also in empty, uncleaned containers.
10.5	**Incompatible materials**	Acids (sulphuric acid, hydrochloric acid, oxalic acid: Risk of violent reaction. Bases (sensitive reaction), Acetic anhydride, Hydrogen peroxide (conc. solns)
10.6	**Hazardous decomposition products**	Thermal decomposition products- carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LC0	inhalation	5h, rat	2400ppm	not classified

Skin irritation	irritant for skin and mucous membranes
Serious eye irritation	irritating - 24 h (rabbit)
Respiratory or skin sensitization	No sensitizing effects known
Germ cell mutagenicity	non mutagenic (Ames test)
Carcinogenicity	no indications for a carcinogenic potential
Reproductive toxicity	no adverse effect on reproduction (rat)
STOT-single exposure	irritating to eye and skin; Category 3 respiratory tract irritation
STOT-repeated exposure	no further data
Aspiration hazard	no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Toxicity to fish	LC50	96h	>100mg/L	*Oryzias latipes*
Toxicity to aquatic invertebrates	EC50	48h	>1000mg/L	*Daphnia magna*

	Toxicity to aquatic algae and cyanobacteria	EC50	72h	>870mg/L	*Selenastrum capricornutum*
12.2	**Persistence and degradability**				
	Biodegradation	68 % (by GC)			
12.3	**Bioaccumulative potential**	Partition coefficient: n-octanol/water log Pow 0.36			
12.4	**Mobility in soil/ water**	The substance will not evaporate into the atmosphere from water surface.			
12.5	**Results of PBT and vPvB assessment**	Not a PBT, vPvB substance according to the REACH regulation			
12.6	**Other adverse effects**	No further information available			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Observe all federal, state, and local environmental regulations.
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Do not dispose in sewage.

◆ SECTION 14: Transport information

		ADR/RID	IMDG	ICAO/IATA
14.1	**UN Number**	3271	3271	3271
14.2	**UN proper shipping name**	ETHERS, N.O.S.		
14.3	**Transport hazard class**	3	3	3
14.4	**Packaging group**	III	III	III
14.5	**Environmental hazards**	not environmentally hazardous, not a marine pollutant		
14.6	**Special precautions for the user**	Flammable liquid; Flash point 55°C (closed cup)		
	EmS Number	F-E, S-D		
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	See regulatory information for transport approval		

◆ SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Major accident hazard	**Seveso III** P5a (Flammable liquid)
International Chemical Inventory Status	
USA (TSCA)	listed
Canada (DSL)	listed
Australia (AICS)	listed
Japan (MITI)	listed
Korea (KECL)	listed
Philippines (PICCS)	listed
China	listed
New Zealand	listed
Taiwan	listed

15.2 Chemical safety assessment

A Chemical Safety Assessment will be carried out at the time of REACH registration

◆ SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Further information:

Sections in which changes have been made since the last version are marked with a diamond ◆ in the left hand margin.

Abbreviations and acronyms in English language:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
DSL	Domestic Substances List
EC	European Commission
EC50	Half maximal effective concentration
EINECS	European Inventory of Existing Commercial Chemical Substances

GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
KECL	Korea Existing Chemicals List
KOC	Soil adsorption coefficient
KOW	Partition Coefficient octanol-water
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
MARPOL	International Convention for the Prevention of Pollution from Ships
MITI	Ministry of International Trade and Industry
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Sources

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ECHA https://echa.europa.eu/substance-information/-/substanceinfo/100.125.495

Chemid https://chem.nlm.nih.gov/chemidplus/rn/7580-85-0