SAFETY DATA SHEET

1. Identification

Product identifier: REWOPOL® SB DO 75

Other means of identification

Recommended use: Industrial use

Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik (SEA) Pte Ltd.
3 International Business Park
#07-18 Nordic European Centre
Singapore 609927

Telephone : +65 6809 6666

Emergency telephone number:

24-Hour Health Emergency : 800 101 2201
+65 3158 1349

2. Hazard(s) identification

Classification according to GHS

Physical Hazards

Flammable liquids	Category 3

Health Hazards

Acute toxicity (Oral)	Category 5
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 2

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
Flammable liquid and vapor.
May be harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
Toxic to aquatic life.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Wash face, hands and any exposed skin thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response: Call a POISON CENTER or doctor/ physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). 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 or doctor/ physician.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards: None known.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.	577-11-7	>60%
Ethanol (Ethyl alcohol)	No data available.	64-17-5	<10%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information:	Remove soiled or soaked clothing immediately
Inhalation:	fresh air supply, consult a doctor if feeling unwell.
Skin Contact:	In case of contact with skin wash off immediately with plenty of water If skin irritation persists, call a physician.
Eye contact:	In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice
Ingestion:	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	The following symptoms may occur: - gastrointestinal complaints Depending on the dose inhalation and/or ingestion may cause: headache, inebriation, unconsciousness.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	foam, carbon dioxide, dry powder, water spray.
Unsuitable extinguishing media:	High volume water jet.
Special hazards arising from the substance or mixture:	In the event of fire the following can be released: - carbon dioxide, carbon monoxide - Sulphur oxides Under certain conditions of combustion traces of other toxic substances cannot be excluded

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	Keep away from sources of ignition. Take action to prevent static discharges. Vapours may form explosive mixtures with air. Cool endangered containers by water spray

Special protective equipment for fire-fighters:	Do not inhale explosion and/or combusition gases. Use self-contained breathing apparatus and wear protective suit

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	High risk of slipping due to leakage/spillage of product Use personal protective equipment. Keep away sources of ignition. Assure sufficient ventilation.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Take up with absorbent material (eg sand, kieselguhr, universal binder) Dispose of absorbed material in accordance with the regulations.
Environmental Precautions:	Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	No data available.
Safe handling advice:	Provide good ventilation of working area (local exhaust ventilation if necessary).Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep container tightly closed in a cool, well-ventilated place.Protect from frost. Keep away from direct sunlight.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information:	No data available.
Eye/face protection:	Tightly fitting safety goggles

Skin Protection

Hand Protection:	Material: Natural rubber. Break-through time: 480 min Glove thickness: 1 mm Material: Chloroprene Break-through time: 480 min Glove thickness: 0,65 mm Material: Nitrile rubber. Break-through time: 480 min Glove thickness: 0,4 mm Material: Butyl rubber. Break-through time: 480 min Glove thickness: 0,7 mm Material: Fluorinated rubber Break-through time: 480 min Glove thickness: 0,7 mm
Other:	protective clothing
Respiratory Protection:	in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2
Hygiene measures:	Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Remove soiled or soaked clothing immediately.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Ethanol.
Odor Threshold:	not measured
Freezing point:	Approximate -4 °F/-20 °C
Boiling Point:	Approximate 172 °F/78 °C
Flammability:	not measured

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	not measured
Explosive limit - lower:	not measured
Flash Point:	77 °F/25 °C (DIN 51755)
Self Ignition Temperature:	not measured
Decomposition Temperature:	not measured
pH:	5 - 7 (10 g/l, 20 °C) in Water

Viscosity	
Dynamic viscosity:	Approximate 100 mPa.s (68 °F/20 °C, Brookfield)
Kinematic viscosity:	Approximate 93 mm2/s (68 °F/20 °C, calculated)
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	10 - 300 g/l (68 °F/20 °C) Soluble
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Vapor pressure:	not measured
Relative density:	not measured
Density:	Approximate 1,07 g/cm3 (68 °F/20 °C) (DGF-C-IV-2)
Bulk density:	No data available.
Relative vapor density:	not measured

Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Minimum ignition temperature:	not measured
Metal Corrosion:	Not corrosive to metals
Evaporation Rate:	not measured

10. Stability and reactivity

Reactivity:	see section "Possibility of hazardous reactions".
Chemical Stability:	The product is stable under normal conditions.
Possibility of hazardous reactions:	No hazardous reactions with proper storage and handling
Conditions to avoid:	Open flames, sparks or input of much heat direct sunlight Freezing.
Incompatible Materials:	Not known.
Hazardous Decomposition Products:	None with proper storage and handling.

11. Toxicological information

Information on toxicological effects

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.

Ingestion: Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50 (ATEmix): 2.819 mg/kg
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	LD 50 (Rat): > 2.100 mg/kg
Ethanol (Ethyl alcohol)	LD 50 (Rat): 10.470 mg/kg

Dermal

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	LD 50 (Rabbit): > 10.000 mg/kg
Ethanol (Ethyl alcohol)	LD 50 (Rabbit): > 20.000 mg/kg (analogy)

Inhalation

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Vapour, No data available. Dusts, mists and fumes, No data available.
Ethanol (Ethyl alcohol)	LC 50 (Rat, Female, Male, 4 h): 124,7 mg/l Vapour Not applicable, Dusts, mists and fumes

Repeated dose toxicity

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	NOAEL - No Observable Adverse Effect Level (Rat(Female, Male), Oral, daily): 750 mg/kg
Ethanol (Ethyl alcohol)	No data available.

Skin Corrosion/Irritation

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	OECD 404 (Rabbit): Irritating.
Ethanol (Ethyl alcohol)	OECD 404 (Rabbit): Not irritating

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	OECD 405 (Rabbit): Risk of serious damage to eyes.
Ethanol (Ethyl alcohol)	OECD 405 (Rabbit): Irritating.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Patch test, HRIPT (Human): Not a skin sensitizer.
Ethanol (Ethyl alcohol)	Maximization Test, OECD 406 (Guinea pig): Not a skin sensitizer. (analogy) Respiratory sensitizer (Rat): Not a respiratory sensitizer

Carcinogenicity

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	Not classified

Germ Cell Mutagenicity

No data available.

In vitro

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Bacterial reverse mutation assay (OECD 471): negative Chromosomal aberration (OECD 473): ambiguous gene mutation test (OECD 476): negative
Ethanol (Ethyl alcohol)	Ames test (OECD 471): negative (analogy) gene mutation test (OECD 476): negative (analogy)

In vivo

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	Chromosomal aberration (OECD 478) Oral (Mouse, Male): negative

Reproductive toxicity

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Oral
Ethanol (Ethyl alcohol)	Not classified

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	Not classified

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	Not classified

Aspiration Hazard

Product:	Not classified
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Not applicable
Ethanol (Ethyl alcohol)	Not classified

Information on health hazards

Other hazards

Product:	No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	LC 50 (Danio rerio, 96 h): 49 mg/l
Ethanol (Ethyl alcohol)	LC 50 (Pimephales promelas, 96 h): 11.200 mg/l

Aquatic Invertebrates

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	EC 50 (Daphnia magna, 48 h): 6,6 mg/l
Ethanol (Ethyl alcohol)	LC 50 (Ceriodaphnia dubia, 48 h): 5.012 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl)	EC 50 (Desmodesmus subspicatus (Scenedesmus subspicatus), 72 h): 82,5 mg/l (EU Method C.3)

ester, sodium salt	
Ethanol (Ethyl alcohol)	EC 50 (Chlorella vulgaris (Fresh water algae), 72 h): 275 mg/l (OECD 201)

Toxicity to microorganisms

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	LD 50 (Diatom (Gyrosigma spencerii), 48 h): 7,7 mg/l Mortality EC 50 (Pseudomonas putida, 16,5 h): 164 mg/l (DIN 38412 part 8) LD 50 (Diatom (Phaeodactylum tricornutum), 48 h): 7,9 mg/l Mortality
Ethanol (Ethyl alcohol)	IC 50 (activated sludge, 3 h): > 1.000 mg/l (OECD 209) (analogy)

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	NOEC (Danio rerio, 120 h): 1.000 mg/l (OECD 212)

Aquatic Invertebrates

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	EC 10 (Daphnia magna, 21 d): 9,8 mg/l (OECD 211)
Ethanol (Ethyl alcohol)	LC 50 (Ceriodaphnia dubia, 10 d): 1.806 mg/l NOEC (Ceriodaphnia dubia, 10 d): 9,6 mg/l LC 50 (Daphnia magna, 2 d): 9.248 mg/l LC 50 (Daphnia magna, 9 d): 454 mg/l NOEC (Daphnia magna, 9 d): 9,6 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	LD 50 (Diatom (Gyrosigma spencerii), 48 h): 7,7 mg/l Mortality EC 50 (Pseudomonas putida, 16,5 h): 164 mg/l (DIN 38412 part 8) LD 50 (Diatom (Phaeodactylum tricornutum), 48 h): 7,9 mg/l Mortality
Ethanol (Ethyl alcohol)	IC 50 (activated sludge, 3 h): > 1.000 mg/l (OECD 209) (analogy)

Persistence and Degradability

Biodegradation

Product:	> 95 % (21 d, OECD 302 B) The product is easily biodegradable.
Components:	

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	91 % (28 d, OECD 310) The product is easily biodegradable., aerobic
Ethanol (Ethyl alcohol)	84 % (20 d) The product is easily biodegradable., aerobic

BOD/COD Ratio

Product: No data available.

Components:

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	58 %

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: not measured

Components:

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	Log Kow: 1,998 20 °C (EU Method A.8)
Ethanol (Ethyl alcohol)	Log Kow: -0,35 20 °C

Mobility in soil:

Product No data available.

Components:

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	No data available.

Product No data available.

Components:

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	No data available.
Ethanol (Ethyl alcohol)	No data available.

Other adverse effects:

Other hazards

Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

14. Transport information

International Regulations

IATA-DGR

UN/ID No.	:	UN 1170
Proper shipping name	:	Ethanol solution
Class	:	3
Packing group	:	III
Labels	:	3
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number or ID number	:	UN 1170
Proper shipping name	:	ETHANOL SOLUTION
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no
Remarks	:	Stowage category A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. Regulatory information

16.Other information, including date of preparation or last revision

Issue Date: 04.03.2019

Version #: 1.2

Further Information: No data available.

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

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