

SAFETY DATA SHEET


in accordance with EU Reg.1907/2006/ANNEX II –REACH
as amended by (EU) No 453/2010)

TURBOTECT 2020

1 IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier: **TURBOTECT 2020** 1.2 Use: Gas turbine compressor washing detergent, industrial use only.
- 1.3 Supplier: Turbotect Limited
CH-5401 Baden
Switzerland Tel: 41(0)56 200 50 20; Fax: 41(0)56 200 50 22
e-mail/Web: turbotect@turbotect.com; www.turbotect.com
- 1.4 Emergency Tel: 41(0)56 200 50 20(office hours)Originator of the SDS: johncopepcm@btinternet.com
-

2 HAZARDS IDENTIFICATION

- 2.1 Classification of the mixture: This preparation is classified as dangerous according to Directive 1999/45/EC. **Irritant:** Irritating to eyes. Risk of serious damage to eyes.
- 2.2 Label elements: **Xi Irritant** **Danger Symbols:** 
- Risk phrases: R36. Irritating to eyes.
R41. Risk of serious damage to eyes
- Safety phrases: S26. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39. Wear suitable protective clothing, gloves and eye / face protection.
- 2.3 Other hazards: none known.
-

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Proprietary mixture of non-ionic surfactant and emulsifier in deionised water solution.

Hazardous ingredient	CAS No.	EINECS No.	Conc. %	Symbols	R Phrases
Ethoxylated fatty alcohols	024938-91-8	n/a	1-15	Xn	R22, R41
2-(2-butoxyethoxy)ethanol	000112-34-5	203-961-6	1-15	Xi	R36
3-butoxypropan-2-ol	005131-66-8	225-878-4	1-15	Xi	R36/38
Ethoxylated branched oxoalcohols	068439-46-3	n/a	1-15	Xi	R22, R41

4 FIRST-AID MEASURES

4.1 Description of first aid measures:

- Contact with skin: Remove contaminated clothing. Wash skin immediately with plenty of soap and water. If symptoms develop, get medical attention.
- Contact with eyes: Wash immediately with eyewash solution or clean water, holding eyelids apart, for at least 10 minutes. Get immediate medical attention.
-

Ingestion: Rinse mouth with clean water. Get immediate medical attention.

Inhalation: Not expected to present a significant inhalation hazard under conditions of normal use.

4.2 Most important symptoms and effects, both acute and delayed: Irritating to eyes and skin. May cause eye damage if untreated.

4.3 Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media: In case of fire use water, foam, carbon dioxide or dry agent.

5.2 Special hazards arising from the mixture: Product has no flash-point, but if heated sufficiently, it will produce flammable vapours.

5.3 Advice for firefighters: Use water spray to cool containers exposed to fire and to protect personnel. Firefighters should wear full protective gear including S.C.B.A. sets with full face shields.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear protective clothing as described in Section 8 of this safety data sheet.

6.2 Environmental precautions: Dispose of in accordance with local regulations. The appropriate regulatory body must be alerted to spillages or uncontrolled discharges to watercourses

6.3 Methods and material for containment and cleaning up: Dike and contain spill. Do not allow spill to enter drains, sewers or waterways, ground, plants and vegetation. Recover free liquid if possible. Absorb spillage with inert material, floor absorbent, earth or sand and collect into appropriate containers.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling: Avoid contact with skin or eyes. Otherwise, no particular precautions are required in normal use. Practice normal industrial hygiene. Provide adequate ventilation. May present slip hazard if spilt.

7.2 Conditions for safe storage, including any incompatibilities: Keep containers closed to prevent contamination when not in use. Do not store near heat, open flames or strong oxidants. Store containers in an adequately ventilated area, protected against the sun (under a roof) and direct exposure to the weather (rain, storms, etc.). Do not store the product at temperatures below its freezing point.

7.3 Specific end uses: Industrial uses (SU3); Use in closed, continuous process with occasional controlled exposure (PROC2); Industrial use of substances in closed systems (ERC7); Washing and cleaning products, including solvent based products (PC35). No Exposure Scenario is available for this mixture.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters: Component substances with Workplace Exposure Limits

Component substance	LTEL, 8hr.TWA		STEL		Time	Authority
	ppm	mg/m ³	ppm	mg/m ³		
2-(2-butoxyethoxy)ethanol	10	67.5	15	101.2	15 mins.	UKHSEEH40/2005

2-(2-butoxyethoxy)ethanol (EC No. 203-961-6):

Derived No Effect Level (DNEL) -Industry Dermal Long Term 20 mg/kg/day

DNEL -Industry Inhalation Long Term 67.5 mg/m³

8.2 Exposure controls:

Wear suitable protective clothing, including eye/face protection and gloves.

Protective gloves must be used if there is a risk of direct contact or splash. Nitrile rubber offers best long-term protection, be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Manufactured/tested in accordance with EN 374.

If ventilation is insufficient, adequate respiratory protection must be provided. At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used. Where air-filtering respirators are appropriate, select a mask & filter combination suitable for aerosols and vapours such as Type-A or Type A-2, ABEK-2 in accordance with EN 141. Check that mask fits tight and change filter regularly.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Clear, blue, low viscosity liquid	
Odour:	Characteristic, sweet.	
Change in physical state:	Boiling point:	approx. 100 °C (212°F)
	Pour point:	0°C (32°F)
Flash point:	>100°C (212°F) (Closed Cup)	
Auto-ignition temperature:	not determined	
Flammability limits in air: (% vol. in air)	LEL:	not applicable
	UEL:	not applicable
Vapour pressure at 20°C (68°F) (non-water fraction):	<0.01 kPa	
Solubility in water:	Complete	
pH Value	7-7.5	
Relative density at 15°C (59°F):	0.995 g/cm ³ (8.30 lb/US Gal)	
Viscosity (ASTM D) at 27°C (80°F) :	6 mm ² /s	

9.2 Other information: The above data are typical values and do not constitute a specification.

10 STABILITY AND REACTIVITY

10.1 Reactivity: Reacts with oxidising agents.

10.2 Chemical stability: Stable in normal use and under recommended storage conditions.

10.3 Possibility of hazardous reactions: Other than 10.1, none known.

10.4 Conditions to avoid: Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight. Avoid freezing conditions.

10.5 Incompatible materials: Strong oxidising agents.

10.6 Hazardous decomposition products: Product stable under normal conditions of storage, handling and use.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute effects:

Inhalation: No significant signs or symptoms indicative of any health hazard are expected.
Ingestion: May cause nausea, vomiting and diarrhoea.
Skin contact: May cause drying of the skin and contact dermatitis.
Eye contact: May cause serious eye irritation.

Chronic effects: No experimental data are available on this preparation. Based on chronic toxicological information on its components it is unlikely to pose a carcinogenic, mutagenic or reproductive toxicity risk to humans if exposure is maintained at or below occupational limits.

12 ECOLOGICAL INFORMATION

12.1 Toxicity: The product has a low order of acute toxicity to aquatic species:

Fish Acute Toxicity Test as per EPA CFR 40 Part 797.1300
Fathead Minnows (*Pimephales promelas*): 96 hours LC₅₀ : 40 mg/ Litre
Daphnid Acute Toxicity Test as per EPA CFR 40 Part 797.1400
Daphnia Magna (Cladocerans): 48 hours LC₅₀: 30 mg/ Litre

12.2 Persistence and degradability: The product is expected to degrade rapidly in the aquatic environment. Product tested according to EPA 40 CFR 796.3100 "Aerobic Aquatic Biodegradation".

Based on dissolved organic carbon (DOC) analysis TURBOTECT 2020 is 90% biodegradable in 28 days. The substance will undergo rapid and ultimate biodegradation in aerobic aquatic environment, also known as "ready biodegradability".

Product also tested according to OECD 301-F "Ready Biodegradability - Evaluation of the Aerobic Biodegradability in an Aqueous Medium, Manometric Respirometry Test".

Based on dissolved organic carbon (DOC) analysis TURBOTECT 2020 is 99% biodegradable.

12.3 Bioaccumulative potential: The product has low potential for bioaccumulation.

12.4 Mobility in soil: no data available.

12.5 Results of PBT and vPvB assessment: Not Classified as PBT/vPvB by current EU criteria

12.6 Other adverse effects: The product is not a "VOC" (Volatile Organic Compound), the vapor pressure (calculated) for the non-water components is 0.05 mm Hg / 20°C (0.007 kPa).

13 DISPOSAL CONSIDERATIONS

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local waste disposal authority.

13.1 Waste treatment methods: The product and effluent resulting from its use should not be released into the environment. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Empty containers may contain flammable or explosive vapours. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14 TRANSPORT INFORMATION

14.1 UN Number: none

14.2 Not Dangerous Goods according to international transport regulations

14.3 Transport hazard class(es): none

14.4 Packaging group:

14.5 Environmental hazards: Not a Marine Pollutant

14.6 Special precautions for user: none

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code: not available

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations / legislation specific for the mixture: none applicable.

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out for this mixture by the supplier.

16 OTHER INFORMATION

This revision replaces previous versions of the Safety Data Sheet for the mixture, which were produced according to the original EU Reg.1907/2006/ANNEX II. There are changes to all Sections.

Risk & Safety Phrase text in full (if not shown Section 2): R22 Harmful if swallowed; R36/38 Irritating to skin and eyes.

Regulatory inventory compliance: AUSTRALIAN INVENTORY (AICS), CANADA INVENTORY (DSL), CHINA INVENTORY (IECS), EC INVENTORY (EINECS/ELINCS), JAPAN INVENTORY (ENCS), KOREA INVENTORY (ECL), PHILIPPINE INVENTORY (PICCS), US INVENTORY (TSCA)

The information and recommendations contained herein are, to the best of Turbotect's knowledge and belief, accurate and reliable. Turbotect does not warrant or guarantee their accuracy or reliability and Turbotect shall not be liable for special incidental and consequential damages, and for any loss or damage arising out of the use thereof. No warranties of merchantability, fitness for use or otherwise are expressed or implied.