

MATERIAL SAFETY DATA SHEET

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1. TRADE NAME

Turbo-k Concentrate (1:4)

2. HAZARDS IDENTIFICATION.

**May cause eye irritation
Possible harmful effects if swallowed**

3. COMPOSITION/INFORMATION ON INGREDIENTS.

3i. Chemical composition:--

Glycol Ethers	7-10%
Nonionic/Amphoteric Surfactants	15-20%
Demineralised Water	75-80%

3ii. Risk Phrases:--

None required

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Exposure route	symptom	treatment
Eyes	Irritation	Wash with plenty of water. If Irritation persists, seek medical advice.
Skin	Irritation	Wash with water. An emollient cream may be used if the skin is degreased
Inhalation	n/a	n/a
Ingestion	Discomfort	Do not induce vomiting. Drink plenty of water and seek medical advice.

5. FIRE FIGHTING MEASURES.

Specific Hazards	Carbon monoxide can arise if incomplete combustion occurs.
Extinguishing Media (Small fires)	Dry chemical powder, carbon dioxide, alcohol resistant foam, water spray or fog, sand or earth.
(Large Fires)	Alcohol resistant foam, water spray or fog
Unsuitable extinguishing media	None
Protective Equipment	Full protective clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES.

Safety Precautions	Avoid contact with eyes and skin.
Environmental Procedure	No special requirement
Clean-up Procedure	Dilute to waste with water

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7. HANDLING AND STORAGE.

- 7.1** Handle in accordance with personal protection procedures outlined under 8.2.1 below.
- 7.2** Store in closed containers above 5 degrees Centigrade.
NB. If Turbo-k Concentrate (1:4) has been stored at sub-zero temperatures, some ice crystals may have formed. Before use, the material should be returned to a minimum of 5EC until all ice crystals have melted.
The mixture can be made homogeneous by stirring or simply rolling the drums for a few minutes. Freezing & thawing does not cause damage to the product nor give rise to phase separation.
- 7.3** Turbo-k Concentrate(1:4) is suitable for both on-line & off-line cleaning of Gas Turbine Compressors in accordance with our instructions & engine manufactures guidelines.
- On-line:** Dilute 1 part Turbo-k Concentrate(1:4) with 4 parts deionized water.
Off-line: Dilute 1 part Turbo-k Concentrate(1:4) with 4 parts clean water.

8. EXPOSURE CONTROL / PERSONAL PROTECTION.

- 8.1** Turbo-k Concentrate(1:4) is safe to handle and no Exposure Limit Value applies.
- 8.2.1** Normal hygiene is required for standard use as a compressor cleaner. If the possibility of regular contact could give rise to degreasing action or development of an allergic reaction, the use of gloves & goggles should be considered.
Goggles and gloves are recommended if bulk quantities are being handled on a regular basis.
- 8.2.2** The surfactants contained in Turbo-k Concentrate(1:4) comply with biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this are held at the disposal of the competent authorities of the Member States and will be made available to them at their request.

9. PHYSICAL AND CHEMICAL PROPERTIES.

- 9.1** Appearance: Straw coloured limpid liquid
Odour: Typical Glycol Ether
- 9.2** pH: 7.5 (neat), 7.3 (in Working Solution)
Flash Point > 100 degrees Centigrade.
Sp. Gravity: 1.00 ± 0.1
Solubility: Soluble in Water

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10. STABILITY & REACTIVITY.

This is a stable formulation

10.1 Conditions to avoid : None

11. TOXICOLOGICAL PROPERTIES.

This product when used in accordance with instructions presents low chemical hazards. Eye contact may cause soreness, and if not treated promptly, could lead to eye damage.
Ingestion would cause discomfort.

No carcinogenic, mutagenic or teratogenic effects have been reported nor expected from Turbo-k Concentrate(1:4) and/or its constituents.

12. ECOLOGICAL INFORMATION.

Turbo-k Concentrate(1:4) is not an aquatic pollutant under ADR 2.3.5.7

Basis of assessment	Information supplied by raw material producers, & separate assessments by Independent certified laboratories. Full reports are available and are available to competent authorities. See 8.2.2
Mobility	Dissolves in water. If product enters soil, it will be mobile and could contaminate ground water.
Persistence/ degradability	All components are fully biodegradable
Bioaccumulation	Unlikely to occur due to metabolism and excretion.
Acute Toxicity- fish (<i>Scophthalmus maximus</i>)	96 Hour LC ₅₀ >2000mg/litre
Algae (<i>Skeletonema costatum</i>)	72 Hour ErC ₅₀ >120 mg/litre
-Crustacea (<i>Corophium sp</i>)	10 Day LC ₅₀ > 5000 mg/litre
Sewage treatment	Dilute with water before disposal. No special treatment is required as the material is readily degraded in sewage treatment plants.

NB :Turbo-k Concentrate (1:4) does not contain any alkyl phenol ethoxylates, nor any other known oestrogenic, carcinogenic, teratogenic or mutagenic compounds.

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13. DISPOSAL CONSIDERATIONS.

Waste disposal: Recover if possible. Otherwise dispose to licensed Waste contractor or incinerate.

Product disposal: Recover if possible. Otherwise dispose to licensed Waste contractor or incinerate.

Container

disposal: Recover if possible. Otherwise dispose to licensed Waste contractor or incinerate.

14. TRANSPORT INFORMATION.

UN No : None Assigned

Not dangerous for conveyance under:-

UK road
RID-ADR
IMO
MARPOL
ICAO

Special precautions : NONE

15. REGULATORY INFORMATION.

A full Chemical Safety Assessment has been carried out on all of the substances used in the preparation of Turbo-k Concentrate (1:4)

Symbol: None required

Risk phrases : Avoid eye contact and minimise skin contact

Safety phrases : S26. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. OTHER INFORMATION.

Use only as directed as a Gas Turbine Compressor Cleaner.

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LEGAL DISCLAIMER.

This safety data sheet is distributed solely for the purpose of the Health and Safety at Work Act 1974 & Regulation 6 of CHIP2: Included under this heading is Article 27 of the Dangerous Substances Directive (67/548/EEC) as amended by the Seventh Amendment (92/32/EEC), Article 10 of Directive 88/379/EEC and the Safety Data Sheets Directive (91/155/EEC, as amended by Directive (93/112/EC) & updated as required under EU Directive 98/24/EC. It does not constitute any warranty or guarantee as to the quality, properties, condition or otherwise of the product. It has been prepared from the best knowledge available to the manufacturer and neither the manufacture nor the distributor shall be liable for any insufficiency or inaccuracy in such information in any case whatsoever.