



TURCO[®] 5884

IN-PLACE JET ENGINE COMPRESSOR CLEANER

DESCRIPTION:

TURCO 5884 is a concentrated liquid cleaner which is effective in the removal of oil, salt and solid deposits from compressor blades, guide vanes and rotors of in-service jet engines. Periodic cleaning of these components is necessary to avoid power loss, abnormal temperature increases and increased fuel consumption.

FEATURES:

TURCO 5884 offers these features:

1. Meets the requirements of and is approved to MIL-C-85704B Type I
2. Listed in General Electric SPM REF #CO4-140
3. Listed in Pratt & Whitney SPMC-87
4. Flash point 65°C minimum (Tag Closed Cup)
5. Typically very low in phenol, chloride and sulfur
6. Ash Free
7. Readily miscible with water

USE INSTRUCTIONS:

Concentration: Mix 1 part TURCO 5884 with 4 parts distilled or demineralized water for PROCEDURE "A". Mix 1 part TURCO 5884 with 1 part distilled or demineralized water, for PROCEDURE "B".

NOTE: For cold weather (below 0°C) add 20% by volume methanol (methyl alcohol) or glycol.

Equipment:

PROCEDURE "A" - Pressure pot with control valve, hose and spray nozzle or a Drum Master Model #220 for direct proportioning from the container.

PROCEDURE "B" - Special cleaning rig consisting of pressure tank, pump, valves and supply hose as specified by Jet Engine Manufacturer.

CLEANING PROCEDURE:

PROCEDURE "A" - Rotating Engine With Starter

1. Mix 1 part TURCO 5884 with 4 parts water in pressure pot (or use a proportioner).
2. Inject the TURCO 5884 water solution into compressor air intake while energizing the starter motor for 60 seconds. Permit the TURCO 5884 solution to dwell 5 minutes.
3. Repeat Step #2.

4. Rinse with cold distilled or demineralized water with starter motor running for 60 seconds
5. After 5 minutes, repeat Step 4 as necessary to flush out all residual TURCO 5884 and loosened soils.
6. After starter has cooled, run engine and test performance

PROCEDURE "B" - With Engine Operating (Allow engine to cool after shutdown for a minimum of 45 minutes.)

1. Fill spray tank with 10 gallons TURCO 5884 and 10 gallons distilled or demineralized water, mix well.
2. Make sure supply hose valve is closed, then pressurize tank with compressed air to 100 Psi.
3. Connect supply hose to anti-icing fitting or as directed by engine manufacturer.
4. Start engine as directed in manual and run at 7,000 RPM or as prescribed by the manufacturer.
5. When engine has stabilized, turn on cleaning rig pressure pump and inject the TURCO 5884 cleaning solution at 45 psi into engine.
6. When the TURCO 5884 solution has passed through the engine, taking approximately 5 minutes, turn off the pump switch and shut off the supply valve.
7. Flush the engine with distilled or demineralized water for approximately 5 minutes.
8. Clear all fluids from the engine by increasing RPM to cruising for approximately 15 minutes.
9. Check engine operation and test performance. Repeat cleaning procedure as necessary.

NOTE: The above procedures are typical, however the process recommended by the engine manufacturer must be followed.

Storage: TURCO 5884 can be stored at temperatures from 0° to 60°C without detrimental effects.

DISPOSAL INFORMATION:

Dispose of TURCO 5884 per local, state and regional regulations. Refer to TURCO MATERIAL SAFETY DATA SHEET for additional disposal information.

CAUTION

TURCO 5884 contains aromatic hydrocarbon, butyl ether glycol and hexylene glycol. Avoid contact with eyes, skin and clothing. Do not take internally. Use with adequate (equivalent to outdoor) ventilation. Do not use near open flames, torches or welding arc.

Protective clothing, such as a chemical face shield or goggles, gloves, boots and apron made from solvent resistant material should be worn when handling this product. A NIOSH-approved respirator should be worn during mist conditions.

Before using this product refer to container label and TURCO MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.

NOTICE:

The above information and recommendations concerning this product are based upon our laboratory tests and field use experience with this or similar products. However, since conditions of actual use are beyond our control, any recommendations or suggestions are made without warranty, express or implied. Manufacturer's and seller's sole obligation shall be to replace that portion of the product shown to be defective. Neither shall be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.

Rev. 9/99(Sup.11/96)
TDB #162-A

SAFETY DATA SHEET

Turco 5884



1. Identification of the substance/preparation and of the company/undertaking

Product name : Turco 5884
 Chemical Formula : Formulated chemical
 Emergency telephone number : Hazchem Emergency: 083 255 8360
 Information Contact: (011) 922 1600 / or 922 1888 after hours

Manufactured/Supplied by : Chemserve Systems
 200 Berg River Drive
 Chloorkop Ext 24

2. Composition / information on ingredients

Substance/Preparation : Preparation

Chemical name*	CAS No.	%	EC Number	Classification
Europe Hydrocarbon		20-40 %	265-189-5	Xn, N R65/66/67-51/53
Hexylenglycol		1 - 5 %	203-489-0	Xi R36/38
Butylglycol		5-10 %	203-905-0	Xn, R20/21/22-37
Triethanolamine		5-15 %	203-049-8	
Fatty acid amide		1-5 %		Xi, R36/38
Nonyl phenol, ethoxylate		1-5 %	polymer	Xi, N R36/38-51/53
Fatty alcohol, ethoxylate		1-5 %	polymer	Xi, R36/38
See Section 15 for the full text of the R Phrases declared above				

* Occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

Physical/Chemical Hazards : The product has been classified as dangerous in the meaning of the actual EU preparation directive.
 Human health hazards : R65 : Harmful : may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.
 R51/53 : Toxic to aquatic organisms, may cause long-term adverse effect in the aquatic environment.

4. First-aid measures

First-Aid measures

Inhalation : Remove to fresh air. Intensive inhalation: remove to fresh air, give oxygen, seek medical advice in hospital. If spray mist is inhaled, seek medical attention.
Ingestion : Drink 1-2 glasses of water, do not induce vomiting, seek medical advice.
Skin Contact : Rinse with running water and soap. Skin care. Replace contaminated clothes.
Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Effects and symptoms

Inhalation : Hazardous in case of inhalation.
Ingestion : Hazardous in case of ingestion.
Skin Contact : Hazardous in case of skin contact (irritant). hazardous in case of skin contact (permeator). Contact with skin causes significant inflammation with erythema, scabs, and oedema.
Eye Contact : Immediately flush eyes with copious amounts of running water (for 10 minutes), if necessary see an oculist.
Aggravating conditions : Repeated exposure to will cause eye and skin irritation.

5. Fire-fighting measures

Extinguishing Media

Suitable : Foam, extinguishing powder, carbon dioxide, water spray jet.
Special fire-fighting procedures : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

- Personal precautions** : Keep away ignition sources. Escaping product causes danger of slipping. Ensure adequate ventilation.
- Environmental Precautions and Clean-up Methods** : Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil.

7. Handling and storage

- Handling** : Avoid open flames and sources of ignition. Take measures to prevent the build up of electrostatic charge.
- Storage** : Keep container tightly closed. Keep in a cool, well-ventilated place. Keep from freezing. Ensure adequate ventilation. Storage Class : VCI-storage class : 3B

Packaging materials

- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Occupational Exposure Limits :

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
Hydrocarbon	MAK : 50 ppm = 200 mg/m ³
2-butoxyethanol	MAK : 20 ppm = 100 mg/m ³
Triethanolamine	MAK : 5 mg/m ³

Personal protective equipment

- Respiratory system** : Wear appropriate respirator when ventilation is inadequate.
- Hands** : Gloves. Use suitable protective gloves made from PVC.
- Eyes** : Splash goggles.



9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Yellowish. (Light.)
- Odor** : not applicable.
- Boiling Point** : not known
- Density** : 0.9 g/cm³
- Vapor Density** : not applicable
- Vapor Pressure** : not applicable
- Solubility** : Completely soluble in water.
- pH** : 9.5 (at 200g/l water) 20 °C
- Flash point** : not applicable
- Explosive properties** : not applicable

10. Stability and reactivity

- Stability** : The product is stable.
- Materials to avoid** : No decomposition if used according to specifications. Reacts with oxidants. In fire toxic fumes may be generated.

11. Toxicological information

Local effects

- Skin irritation** : Prolonged or repeated skin contact can lead to skin degreasing and hence to skin irritation.
- Eye irritation** : Prolonged or repeated contact may cause eye irritation.
- Acute toxicity** : no known data.

- Chronic toxicity** : Repeated exposure will cause eye and skin irritation.

Specific effects

- Carcinogenic Effects** : no known data

12. Ecological information

Ecotoxicity : no data available.

13. Disposal considerations

Disposal Consideration : DO NOT RE-USE CONTAINERS. Puncture all plastic containers. Flatten all metal containers. Shred all polywoven bags.





Methods of disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Classifier : No additional information.

European Waste Catalogue (EWC) : No known data.

Hazardous Waste : The classification of the product may meet the criteria for a hazardous waste

14. Transport information**International transport regulations**

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
ADR/RID Class Land - Road/Railway	3082	Environmentally hazardous substance, liquid, n.o.s.	9	III		-
ADN Class Inland waterways	3082	Environmentally hazardous substance, liquid, n.o.s.	9	III		
IMDG Class Sea	3082	Environmentally hazardous substance, liquid, n.o.s.	9	III		
IATA-DGR Class Air	3082	Environmentally hazardous substance, liquid, n.o.s.	9	III		

15. Regulatory information**EU Regulations**

Risk Phrases : R65 : Harmful : may cause lung damage if swallowed.
R67 : Vapours may cause drowsiness and dizziness.
R51/53 : Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Safety Phrases : S23 : Do not contact with skin and eyes S62 : if swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.
S 60 : This material and its container must be disposed of as hazardous waste.

Product Use : no additional information.

16. Other information

Other Special Considerations : No additional remark.

HISTORY

Date of issue : 2012/04/25.

Date of Previous Issue : No Previous Validation.
Validated by H. Mthiyane on 2012/04/25.
Verified by L. Wilken.

Notice to Reader

The information and recommendations presented on this data sheet are to the best of our knowledge and belief accurate and reliable, but do not constitute a warranty. None of our representatives or agents are authorised to give any guarantee or warranty or make any representation in addition or contrary to the above, and we do not accept liability for claims of any kind for any loss including, without limitation, consequential loss, injury or damage arising from the use of the information or recommendations, or of the products which are subject to the subject matter hereof. These products are sold subject to our standard conditions of sale and tender, copies of which are available on request.