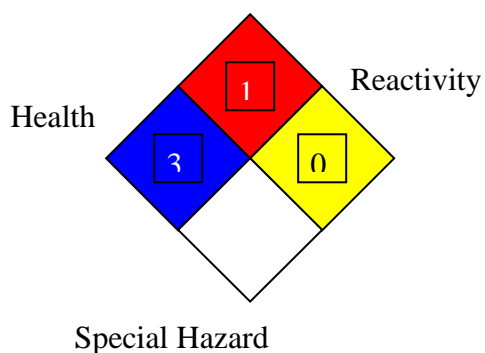




Jordan Petroleum Refinery Company Material Safety Data Sheet Brake Fluid DOT-4

NFPA: Flammability



JPRC LUB-25

HMIS III:

Flammability	1
Health	3
Reactivity	0

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Brake fluid DOT-4
MSDS Number:	JPRC LUB
Product Use Description:	For use in the lubrication of refrigerator compressors. May be used in other applications, where very low temperatures require the use of low pour point non-additive oil.
Company	Jordan Petroleum Refinery Amman – Jordan. TEL: + 962 6 4630151 or 4657600 FAX: + 962 6 4657934 or 4657939 P.O.BOX: 3396 Amman 11181 – Jordan P.O.BOX: 1079 Amman 11118 – Jordan Website: http://www.jopetrol.com.jo E-mail: addewan@jopetrol.com.jo

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS.

Composition :	Tec lube Brake fluid Dot.4

SECTION 3. HAZARDS IDENTIFICATION

Hazardous identification

US OSHA hazard communication standard:

H318 Causes serious eye damage.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor. P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children

SECTION 4. FIRST AID MEASURES

First Aid Measures:

Eye Contact

Skin contact

Inhalation

Ingestion

Remove affected person from source of contamination. Get medical attention if any discomfort continues. Inhalation Get medical attention if any discomfort continues. Ingestion Consult a physician for specific advice. Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues. Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Do not rub eye.

SECTION 5. FIRE-FIGHTING MEASURES

Fire- Fighting Measure

Extinguishing media:

Use fire-extinguishing media suitable for the surrounding fire.

Hazardous decomposition products

Carbon monoxide.

Accidental Release Measures

The following steps should be undertaken following a spill or leak:
1- Notify safety personal.
2- Remove all sources of heat and ignition.
3- Ventilate potentially explosive atmospheres.
4- Do not touch the spilled material; stop the leak if it is possible to do so without risk.
5- Use water spray to reduce vapors; do not get water inside container. Do not flush waste to sewers or open waterways.

	6- For liquid spills, cover with sand and then remove for later disposal. 7- Prevent spills from entering storm sewers or drains.
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Personal precautions

For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces. Follow precautions for safe handling described in this safety data sheet.

SECTION 7. HANDLING AND STORAGE

Handling:

Read and follow manufacturer's recommendations. Avoid spilling. Avoid contact with skin and eyes. Remove contamination with soap and water or recognized skin cleansing agent. Do not use organic solvents. Do not eat, drink or smoke when using the product. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

Storage

Keep away from food, drink and animal feeding stuffs. Store in tightly-closed, original container in a dry, cool and well-ventilated place.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls/ personal protection

Respiratory protection

No special requirements under ordinary conditions of use and with adequate ventilation.

Skin and body

No special equipment required. However, good personal hygiene practices should always be followed.

Hands

Use chemical resistant apron and / or other clothing to protect against hot liquid & to avoid skin contact

Eyes

Normal industrial eye protection practices should be.

Engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below there respective threshold limits value.

Occupational exposure limits

Exposure limit for oil mist:

No exposure limits known for ingredient(s).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid.
Colour	Colourless. to Amber.
Odour	No characteristic odour.
Odour	threshold Not determined. Not determined.
pH	pH (concentrated solution): 7.0 - 10.5
Water content max 0.4%	0.15
Viscosity @ 100 °C cSt	2.38
Melting point	<-50°C
Initial boiling point and range	>205°C
Flash point	>90°C CC (Closed cup).
Evaporation rate	negligible
Upper/lower flammability	Not determined.
Vapour pressure	< 2 mbar
Auto-ignition temperature	➤ 300 C

SECTION 10. STABILITY AND REACTIVITY

Stability:	The product is stable.
Material to avoid:	Strong oxidizing and reducing agents.
Condition to avoid:	High temperatures, sparks, and open flames.
Hazardous decomposition products:	Sulphur oxides. Hydrogen sulphide. Carbon monoxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Routes of Entry	Skin, Eyes, Ingestion, and Inhalation
Acute Effects	
Inhalation	Irritating to respiratory system.
Ingestion	Not determined.
Skin contact	Non-irritating to the skin.
Eye contact	Irritating to eyes.

LD₅₀ >2000 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Environmental Fate and effects:	This product is expected to be inherently biodegradable. There is no evidence to suggest bioaccumulation will occur. It is not expected to be toxic to aquatic organisms. Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse
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ecological effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal

Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the resource conservation and recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

RCRA Information

The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40CFR, Part 261D), nor is not formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosively, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

SECTION 14. OTHER INFORMATION

LD₅₀

Lethal Dose (mg/kg)

PEL

Permissible Exposure Limits

NFPA

National Fire Protection Association:

PPE

Personal Protective Equipment

SCBA

Self – Contained Breathing Apparatus

TWA

Time – Weighted Average.

OSHA

Occupational Safety And Health Administration

ACGIH

American Conference of Governmental Industrial Hygienists