

ANGLO DESIGN HYDRAULIC OIL

Chemwatch Material Safety Data Sheet

Revision No: 2.0

Hazard Alert Code:
MODERATE

Issue Date: 30-Mar-2006

Chemwatch 69372

CD 2007/3

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**PRODUCT NAME:** ANGLO DESIGN HYDRAULIC OIL**SYNONYMS**

"Hydraulic fluid Oil"

PRODUCT USE

Oil for use in hydraulic systems.

SUPPLIER

Company: Anglo Design

Address:

2 Beaumont Road

Mount Kuringai






NSW, 2080

AUS

Telephone: +61 2 9457 8566

Fax: +61 2 9457 8057

HAZARD RATINGS

		Min	Max	
Flammability:	1			
Toxicity:	0			
Body Contact:	0			
Reactivity:	0			
Chronic:	2			

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

Section 2 - HAZARDS IDENTIFICATION**STATEMENT OF HAZARDOUS NATURE****NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.****POISONS SCHEDULE**

None

RISK

Cumulative effects may result following exposure*.

* (limited evidence).

SAFETY

Do not breathe gas/ fumes/ vapour/ spray.

Avoid contact with skin.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
severely refined hydrocarbon oil as mineral oil	Not avail.	> 99
corrosion inhibitors, antioxidants, unregulated performance enhancers as zinc dialkyl dithiophosphate	68649-42-3	1-10
		< 1

NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

Section 4 - FIRST AID MEASURES**SWALLOWED**

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.

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- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

Section 5 - FIRE FIGHTING MEASURES**EXTINGUISHING MEDIA**

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Other combustion products include: carbon dioxide (CO₂) and minor amounts of nitrogen oxides (NO_x), sulfur dioxide (SO₂), phosphorus oxides (PO_x), zinc oxide.

FIRE INCOMPATIBILITY

Avoid contamination with strong oxidising agents as ignition may result.

HAZCHEM

None

Section 6 - ACCIDENTAL RELEASE MEASURES**EMERGENCY PROCEDURES****MINOR SPILLS**

Slippery when spilt. Clean up all spills immediately.

Wear impervious gloves and safety glasses.

Wipe up and absorb small quantities with vermiculite or other absorbent material. Remove excess with a cloth or paper towel.

Place in suitable containers for disposal.

MAJOR SPILLS

Slippery when spilt. Remove all ignition sources.

Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

ANGLO DESIGN HYDRAULIC OIL

Chemwatch Material Safety Data Sheet

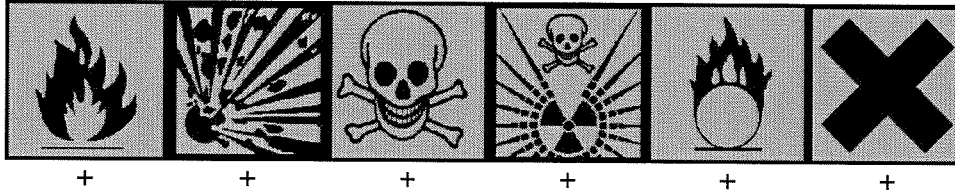
Revision No: 2.0

Hazard Alert Code:
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Chemwatch 69372

CD 2007/3

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE**PROCEDURE FOR HANDLING**

Remove all ignition sources.

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid storage with oxidisers.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE CONTROLS**

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC
Australia Exposure Standards	zinc dialkyl dithiophosphate (Inspirable dust (Not specified))		10					

ODOUR SAFETY FACTOR (OSF)

OSF=1.2E3 (zinc dialkyl dithiophosphate)

Exposed individuals are reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class A or B.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities
B	26-550	As "A" for 50-90% of persons being distracted
C	1-26	As "A" for less than 50% of persons being distracted

10-50% of persons aware of being tested

ANGLO DESIGN HYDRAULIC OIL**Hazard Alert Code:
MODERATE**

Chemwatch Material Safety Data Sheet

Revision No: 2.0

Chemwatch 69372

Issue Date: 30-Mar-2006

CD 2007/3

D	0.18-1	perceive by smell that the Exposure Standard is being reached
E	<0.18	As "D" for less than 10% of persons aware of being tested

MATERIAL DATA

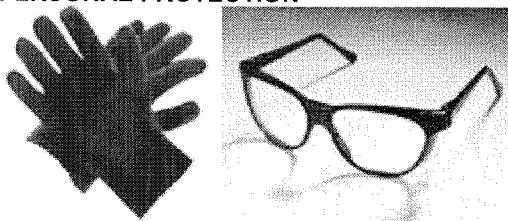
None assigned. Refer to individual constituents.

INGREDIENT DATA**MINERAL OIL:**

Human exposure to oil mist alone has not been demonstrated to cause health effects except at levels above 5 mg/m³ (this applies to particulates sampled by a method that does not collect vapour). It is not advisable to apply this standard to oils containing unknown concentrations and types of additive.

ZINC DIALKYL DITHIOPHOSPHATE:

No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION**EYE**

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

HANDS/FEET

- Barrier cream and PVC gloves or Nitrile rubber gloves or Rubber Gloves. Safety footwear.

OTHER

- Overalls.
- Eyewash unit.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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Chemwatch Material Safety Data Sheet
Issue Date: 30-Mar-2006

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Hazard Alert Code:
MODERATE

Chemwatch 69372
CD 2007/3

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE**

Clear amber free flowing liquid, floats on water. Mineral oil smell.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

Molecular Weight: Not applicable.

Melting Range (°C): Not available.

Solubility in water (g/L): Immiscible

pH (1% solution): Not applicable.

Volatile Component (%vol): Nil @ 38 C.

Relative Vapour Density (air=1): > 1

Lower Explosive Limit (%): Not available

Autoignition Temp (°C): Not available.

State: Liquid

Boiling Range (°C): Not available.

Specific Gravity (water=1): 0.88-0.92

pH (as supplied): Not applicable

Vapour Pressure (kPa): Negligible

Evaporation Rate: Non Volatile

Flash Point (°C): > 100

Upper Explosive Limit (%): Not available

Decomposition Temp (°C): Not available.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION**CONDITIONS CONTRIBUTING TO INSTABILITY**

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION**POTENTIAL HEALTH EFFECTS****ACUTE HEALTH EFFECTS****SWALLOWED**

Considered an unlikely route of entry in commercial/industrial environments.

The material is slightly discomforting to the gastro-intestinal tract.

Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

EYE

The material is moderately discomforting to the eyes and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.

SKIN

The material is slightly discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis.

The material may accentuate any pre-existing dermatitis condition.

INHALED

Not normally a hazard due to non-volatile nature of product.

Inhalation hazard is increased at higher temperatures.

The vapour from heated material is moderately discomforting to the upper respiratory tract if inhaled.

CHRONIC HEALTH EFFECTS

Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet. There are few systemic effects, but prolonged exposure may lead to a higher incidence of lung scarring.

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

MINERAL OIL:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

TOXICITY IRRITATION.

#32oil

ZINC DIALKYL DITHIOPHOSPHATE:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

TOXICITY**IRRITATION**

No data available Eye (human):SEVERE [Manufacturer]

Reproductive effector in rats.

Section 12 - ECOLOGICAL INFORMATION

No data for Anglo Design Hydraulic Oil.

Refer to data for ingredients, which follows:

MINERAL OIL:

DO NOT discharge into sewer or waterways.

Section 13 - DISPOSAL CONSIDERATIONS

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- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG**Section 15 - REGULATORY INFORMATION****POISONS SCHEDULE**

None

REGULATIONS

Anglo Design Hydraulic Oil (CAS No: None):

No regulations applicable

zinc dialkyl dithiophosphate (CAS: 68649- 42- 3) is found on the following
regulatory lists;

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) -
Schedule 4International Council of Chemical Associations (ICCA) - High Production Volume
List

OECD Representative List of High Production Volume (HPV) Chemicals

zinc dialkyl dithiophosphate (CAS: 68457- 79- 4) is found on the following
regulatory lists;

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) -
Schedule 4International Council of Chemical Associations (ICCA) - High Production Volume
List

OECD Representative List of High Production Volume (HPV) Chemicals

zinc dialkyl dithiophosphate (CAS: 26566- 95- 0) is found on the following
regulatory lists;

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) -
Schedule 4

OECD Representative List of High Production Volume (HPV) Chemicals

zinc dialkyl dithiophosphate (CAS: 7491- 65- 8) is found on the following
regulatory lists;

Australia National Pollutant Inventory

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) -
Schedule 4zinc dialkyl dithiophosphate (CAS: 4563- 55- 7) is found on the following
regulatory lists;

Australia Inventory of Chemical Substances (AICS)

zinc dialkyl dithiophosphate (CAS: 68442- 22- 8) is found on the following
regulatory lists;

OECD Representative List of High Production Volume (HPV) Chemicals

No data available for mineral oil as CAS: Not avail.

No data available for zinc dialkyl dithiophosphate as CAS: 1910- 06- 1.

Section 16 - OTHER INFORMATION**Ingredients with multiple CAS Nos**

Ingredient Name	CAS
zinc dialkyl dithiophosphate	68649-42-3, 68457-79-4, 1910-06-1, 26566-95-0, 7491-65-8, 4563-55-7, 68442-22-8

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Issue Date: 30-Mar-2006

Print Date: 6-Sep-2007