



# ADNOC Refining "Safety Data Sheet"

# Safety Data Sheet

## AD BASE 3.0cSt

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	AD BASE 3.0 cSt
<b>Other means of identification</b>	Lubricating Oil(Petroleum), C20-50, hydrotreated neutral oil-based
<b>Product Family</b>	Petroleum oils
<b>Recommended Use</b>	Oil and Gas field drilling and production operations.
	Lubricant.
<b>Manufacturer</b>	ADNOC Refining P.O. Box 3593, Abu Dhabi, United Arab Emirates (971-2) 602 7000, www.adnoc.ae
<b>Emergency Phone No.</b>	ADNOC Refining, (971-2) 602 7000

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Aspiration hazard - Category 1

#### GHS Label Elements



#### Signal Word:

Danger

#### Hazard Statements:

H304 May be fatal if swallowed and enters airways.

#### Precautionary Statements:

#### Prevention:

P210	Keep away from heat, sparks, open flames, hot surfaces – no smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands and skin thoroughly after handling.
P280	Wear protective gloves/eye protection/face protection.

#### Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water

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P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P304 + P312	IF INHALED: Call a POISON CENTRE/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate foam, carbon dioxide, dry chemical powder to extinguish.

#### Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
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#### Disposal:

P501	Dispose of contents/container in accordance with local, regional, national and international regulations.
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#### Other Hazards

May catch fire and/or explode, especially in a confined space. Electrostatic charges, which can ignite this product, may be generated during handling.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration (%)	EC Number
Lubricating oils (petroleum), C20-50, hydrotreated, neutral oil-based	72623-87-1	100	276-738-4

#### Notes

Mixture of paraffinic, naphthenic (cycloparaffins), and aromatic hydrocarbon compounds, predominantly in the range of C20-C50. Contains up to 10 ppm/wt. sulphur.

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Get medical attention promptly if person feels unwell.

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#### Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with gently flowing lukewarm water and mild soap for 15 minutes. If skin irritation occurs get medical advice/attention.

#### Eye Contact

Remove contact lenses, if present and easy to do. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice/attention.

#### Ingestion

Rinse mouth with water. Do not induce vomiting. If vomiting occurs naturally, have person lean forward to reduce risk of aspiration. Have person rinse mouth with water again. Seek immediate medical attention.

#### Most Important Symptoms and Effects, Acute and Delayed

If inhaled and/or on skin: may cause mild irritation. If in eyes: mist may cause irritation. If swallowed: aspiration hazard. If vomited, may enter the lungs causing severe, possibly fatal, effects.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam. Water spray may be used to keep fire-exposed containers and structures cool.

##### Unsuitable Extinguishing Media

Do not use solid stream of water as it may spread the fire.

#### Specific Hazards Arising from the Chemical

During a fire, irritating and/or toxic substances, such as carbon monoxide, sulfur, nitrogen and phosphorus oxides, reactive hydrocarbons and polycyclic aromatic hydrocarbons (PAHs) may be generated.

#### Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Cool down tanks and surfaces exposed to the fire by abundant spraying with water. Isolate the source of combustion and allow to burn out under supervision or use fire extinguishers where appropriate. Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with full face-piece.

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#### SECTION 6. ACCIDENTAL RELEASE MEASURES

##### Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate and ventilate the area. Remove all sources of ignition. Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Do not touch product or enter areas with high airborne concentration unless wearing appropriate protective equipment (see Section 8). Remove or isolate incompatible materials as well as other hazardous materials.

##### Environmental Precautions

Do not allow product to enter drains, sewers, ground or waterways. Inform environmental and public safety authorities of a release to the environment.

##### Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth). Do not use combustible materials such as sawdust. Use only non-sparking, intrinsically safe equipment for spillage collection. Transfer absorbed material to closed, labelled containers and handle as hazardous waste. Dike and recover contaminated water for appropriate disposal.

#### SECTION 7. HANDLING AND STORAGE

##### Precautions for Safe Handling

Eliminate all ignition sources. Use non-sparking equipment, explosion-proof ventilation systems, and intrinsically safe electrical equipment. Bond and ground containers during product transfer. Do not get in eyes, on skin or on clothing. Avoid release to the environment. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Prevent contact with incompatible chemicals. Keep containers tightly closed when not in use or empty.

##### Conditions for Safe Storage

Keep away from heat and sources of ignition. Store only in approved, closed containers in a cool, dry, well-ventilated area. Protect containers against physical damage. Use secondary containment and inspect periodically for damage or leaks. Inspect all incoming containers to make sure they are properly labelled and not damaged. Separate from incompatible materials. (e.g., oxygen, chlorine gases).

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL
	TWA	STEL	TWA
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	5 mg/m <sup>3</sup> as oil mist	10 mg/m <sup>3</sup> as oil mist	5 mg/m <sup>3</sup> as oil mist

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#### Appropriate Engineering Controls

Due to low vapour pressure, high concentrations of vapour are unlikely at normal temperatures. If mist is generated or temperatures are elevated, use local exhaust ventilation to control airborne exposure. Control ignition sources and static electricity discharges which includes bonding of equipment to ground. Provide eyewash and safety shower if contact or splash hazard exists.

#### Individual Protection Measures

##### Eye/Face Protection

Wear face shield or chemical safety goggles when splashes may occur.

##### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots. Suitable materials are: nitrile rubber, polyvinyl chloride, neoprene rubber.

##### Respiratory Protection

Not normally required under normal conditions and temperatures, unless oil mist is generated. If oil mist is generated, air-purifying respirators should have particulate filters as well as organic vapour cartridges.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Basic Physical and Chemical Properties

<b>Appearance</b>	Clear colourless oily liquid
<b>Odour</b>	Characteristic hydrocarbon odour.
<b>Odour Threshold</b>	Not available
<b>Melting Point/Freezing Point</b>	$\leq -12\text{ }^{\circ}\text{C}$ (10 $^{\circ}\text{F}$ ) (melting)
<b>Initial Boiling Point/Range</b>	270 – 600 $^{\circ}\text{C}$ (518 - 1112 $^{\circ}\text{F}$ )
<b>Flash Point</b>	$> 170\text{ }^{\circ}\text{C}$ (338 $^{\circ}\text{F}$ ) (open cup)
<b>Evaporation Rate</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available
<b>Vapour Pressure</b>	$< 0.000457\text{ kPa}$ (0.003428 mm Hg) at 25 $^{\circ}\text{C}$
<b>Density</b>	0.82 - 0.85g/mL at 15 $^{\circ}\text{C}$
<b>Vapour Density</b>	Not available
<b>Solubility</b>	Practically insoluble in water
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	$>4$
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	2.9 - 3.1 mm <sup>2</sup> /s at 100 $^{\circ}\text{C}$ (kinematic)

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**Physical State**  
**Electrical Conductivity**

Liquid  
Approximately 1 pS/m

## SECTION 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable at normal temperatures and pressure.

### Possibility of Hazardous Reactions

May react with oxidizers such as peroxides, nitric acid, and perchlorates.

### Conditions to Avoid

Heat, sparks, ignition points, flames, static electricity, strong oxidizing agents.

### Incompatible Materials

Avoid contact with strong acids and oxidizing agents.

### Hazardous Decomposition Products

A complex mixture of airborne material will evolve during heating or burning. Carbon monoxide, carbon dioxide, sulfur, nitrogen and phosphorus oxides, reactive hydrocarbons and polycyclic aromatic hydrocarbons (PAHs) may be formed.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation of oil mist. Skin contact; eye contact.

### Acute Toxicity

Chemical Name	LC50	LD50	LD50 (dermal)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (based on tests of similar compounds)	>= 5.5 mg/L (rat; (4-hour exposure)	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)

### Skin Corrosion/Irritation

Direct contact may cause mild skin irritation.

### Serious Eye Damage/Irritation

Oil mist may cause eye irritation.

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#### STOT (Specific Target Organ Toxicity) - Single Exposure

##### Inhalation

Inhalation of oil mist may cause respiratory irritation.

##### Ingestion

Low toxicity if ingested, except for aspiration hazard. May cause gastrointestinal effects such as vomiting and diarrhea.

##### Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited. This can cause potentially fatal chemical pneumonia. Symptoms may include coughing, choking, shortness of breath, difficult or rapid breathing, and wheezing.

#### STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged contact may cause skin irritation and dermatitis.

#### Respiratory and/or Skin Sensitization

Not expected to be a skin or respiratory sensitizer.

#### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Not Listed	Not designated	Not Listed	Not Listed

#### Reproductive Toxicity

##### Development of Offspring

Not known to harm the unborn child.

##### Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

##### Germ Cell Mutagenicity

Not known to be a mutagen.



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#### SECTION 12. ECOLOGICAL INFORMATION

##### Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (based on tests of closely related mixture)	>100 mg/L(fathead minnow 96 hour)	10,000 mg/L (Daphnia magna (water flea); 48-hour)	1000 mg/L (96-hour)

##### Chronic Aquatic Toxicity

Chemical Name	NOEC Crustacea
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (based on tests of closely related mixture)	10,000 mg/L (Daphnia magna (water flea); 21-day)

##### Persistence and Degradability

Not likely to undergo rapid biodegradation.

##### Bioaccumulative Potential

Has potential to bioaccumulate.

##### Mobility in Soil

Because of low vapour pressure and low solubility in water, compounds are likely to remain in soil and can be adsorbed onto organic materials.

#### SECTION 13. DISPOSAL CONSIDERATIONS

##### Disposal Methods

Material Disposal: Recover or recycle if possible. Do not dispose into the environment, in drains or in water courses. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations through a recognized collector or contractor.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Do not weld, cut or perform hot work on empty container. Residues may cause an explosion hazard if heated above the flash point. Do not pollute the soil, water or environment with the waste container.

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#### SECTION 14. TRANSPORT INFORMATION

UN No.	Proper Shipping Name	Transport Hazard Class	Packing Group
None (not regulated)	AD BASE 3.0cSt (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based)	Not applicable	Not applicable
Marine Pollutant: No			
<b>MARPOL Annex I rules apply to bulk shipment by sea.</b>			

#### SECTION 15. REGULATORY INFORMATION

##### Safety, Health and Environmental Regulations

##### CANADA

DSL - Listed on the DSL inventory

##### USA

Toxic Substances Control Act (TSCA) Section 8(b)  
Listed on the TSCA Inventory.

##### European Union

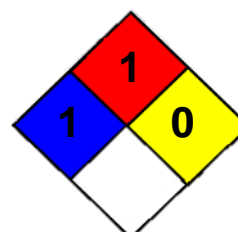
This product is classified in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended

#### SECTION 16. OTHER INFORMATION

NFPA Rating    Health - 1        Flammability - 1        Instability – 0

0=Insignificant/No Hazard.  
1=Slight Hazard.  
2=Moderate Hazard.  
3=High/Serious Hazard.  
4=Extreme/Severe

FLAMMABILITY
HEALTH
REACTIVITY
SPECIAL HAZARDS



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### SDS Prepared By:

HSE Division - ADNOC Refining

**PREPARATION** Date: May 16, 2017. Revised October 22, 2018

### KEY TO ABBREVIATIONS

ACGIH® = American Conference of Governmental Industrial Hygienists

AIHA = American Industrial Hygiene Association

IARC = International Agency for Research on Cancer

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

NTP = National Toxicology Program

OSHA = US Occupational Safety and Health Administration

### References

CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Chemview Data Base. United States Environmental Protection Agency (EPA).

Petroleum High Production Volume Testing Group.

### Disclaimer

ADNOC Refining does not assume any liability arising out of product used by others. The information, recommendations and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of this product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulation.