

MATERIAL SAFETY DATA SHEET

ARDROX HF-R 9PR5

DATE: 4 August 2004

1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Product Name **ARDROX HF-R_9PR5**
Chemical Formula C6-H14

Company Identification African Oxygen Limited
23 Webber Street
Johannesburg, 2001
Tel. No: (011) 490-0400
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2 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name n-Hexane
Chemical Family
CAS No. 110-54-3
Concentration (%) >90
EC No. 203-777-6

3 HAZARDS IDENTIFICATION

Main Hazards

Adverse Health Effects Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of impaired fertility.

Chemical Hazards Highly flammable

Biological Hazards
Inhalation Danger of serious damage to health by prolonged exposure through inhalation.

Eye Contact
Skin Contact Irritant
Ingestion

4 FIRST AID MEASURES

Eye Contact Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.

Skin Contact In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before re-use. Thoroughly clean shoes before re-use. Get medical attention.

Ingestion **DO NOT** induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Effects and

Symptoms:

Skin Contact Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

5 FIRE FIGHTING MEASURES

Extinguishing Media SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

Emergency Actions

Protective Clothing Be sure to use an approved / certified respirator or equivalent.

Environmental Precautions

Special Fire-Fighting Procedures Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Specific Hazards
Hazardous Thermal De-Composition Products These products are carbon oxides (CO, CO2)

6 ACCIDENTAL RELEASE MEASURES

Personal precautions Splash goggles. Overalls. Vapour respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

Environmental precautions Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Do not get water inside container. Prevent entry into sewers, basements or confined areas; dike if needed.

Spillages Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Call for assistance on disposal.

7 HANDLING AND STORAGE

Handling Keep locked up. Keep away from heat. Keep away from source of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas / fumes / vapour / spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

Storage Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container lightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Use original container.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Ingredient name: n-Hexane:
ACGIH TLV (United States 2000). Skin
TWA: 50ppm 8 hou(s)
NIOSH REL (United States 2000).
TWA: 180mg/m³ 10 hour(s)
TWA: 50ppm 10 hours
OSHA Final Rule (United States 1989).
TWA: 180mg/m³ 8 hour(s)
TWA: 50ppm 8 hour(s)

Personal Protection Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using toilet, and at end of the day.

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

Hazards
Respiratory Vapour respirator. Be sure to use an approved/certified respirator or equivalent.

Skin & Body Overalls
Hands Gloves
Eyes Safety glasses

9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Chemical Symbol C₆H₁₄
Molecular Weight
Specific Volume
Density 0.66 – 0.68g/cm³
Vapour Density 2.97 (Air = 1)

Vapour Pressure	16.5 kPa (124mmHg) (at 20°C)
Evaporation Rate (butyl acetate=1)	6.82 (n-Hexane) compared to Solvent.
Colour	Light, Colourless
Taste	None
Odour	Petroleum odour
Physical state	Liquid
Boiling Point	69°C (156.2°F)
Melting Point	May start to solidify at -95°C (-139°F)
Solubility	Insoluble in cold water
pH	Not applicable
Flash point	Closed cup: 2°C (35.6°F) Open cup: -22°C (-7.6°F)
Fire Hazards in Presence of various Substances	Flammable in presence of open flames, sparks and static discharge. Slightly flammable to flammable in presence of oxidizing materials.
Auto-ignition temp	225°C (437°F)
Explosive properties	Slightly explosive in presence of oxidizing materials.
Lower explosion Limit	LOWER: 1.1% UPPER: 7.5%

10 STABILITY AND REACTIVITY

Stability	The product is stable.
Conditions to avoid	
Incompatible Materials	
Hazardous Decomposition Products	These products are carbon oxides (CO, CO ₂).

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Acute oral toxicity (LD50): 28710 mg/kg (Rat).
Skin	Hazardous in case of skin contact (irritant).
Chronic Toxicity	
Carcinogenicity	Classified None, by NIOSH.
Mutagenicity	
Reproductive Hazards	
Teratogenic	Classified 3 by European Union

12 ECOLOGICAL INFORMATION

Persistence / Degradability	BOD and COD: The BOD is 0 g O ₂ /g [7 day(s)] (theor.)
Ecotoxicity	n-Hexane: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

13 DISPOSAL CONSIDERATIONS

Disposal Methods	Waste must be disposed of in accordance with Federal, State and Local environmental Control Regulations.
Disposal of packaging	DO NOT RE-USE CONTAINERS. Puncture all plastic containers. Flatten all metal containers. Shred all polywoven bags.
Waste Classification	A3140
Hazardous Waste	The classification of the product may meet the criteria for a hazardous waste.

14 TRANSPORT INFORMATION

ROAD TRANSPORTATION

UN No.	1208
ERG No	128
Hazchem warning	
ADR/RID	
Class	3
Packaging Group	11
Label	Flammable
Proper Shipping Name	HEXANES

SEA TRANSPORTATION

UN No.	1208
IMDG	
Class	3
Packaging group	11
Label	Flammable
Proper Shipping Name	HEXANES

AIR TRANSPORTATION

UN No.	1208
ICAO/IATA Code	
Class	3
Packaging group	11
Label	Flammable
Proper shipping Name	HEXANES
Packaging instructions	
- Cargo	
- Passenger	
Maximum quantity allowed	
- Cargo	
- Passenger	

15 REGULATORY INFORMATION

EEC Hazard class	Highly flammable. Harmful.
Risk phrases	R11 - Highly flammable R38 - Irritating to skin. R48/20 - Harmful: Danger of serious damage to health by prolonged exposure through inhalation. R62 - Possible risk of impaired fertility.
Safety phrases	S2 - Keep out of reach of children S29 - Do not empty into drains. S36/37 - Wear suitable protective clothing and gloves. S46 - If swallowed, seek medical advice immediately and show this container or label.
Contains	n-Hexane
Product Use	Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.
National Legislation:	None

16 OTHER INFORMATION

Other Special Considerations: No known data.

17 EXCLUSION OF LIABILITY

Information contained in this publication is accurate at the date of publication. The company does not accept liability arising from the use of this information, or the use, application, adaptation or process of any products described herein.



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For product and safety enquiries please phone

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