

# ARDROX HF-P

## SAFETY DATA SHEET (SDS)

**Please ensure that this SDS is received by the appropriate persons**

Review Date: 31/08/2023 v01

Emergency: 0860 02 02 02


Document Number: AFX-SDS-0075

1. PRODUCT AND COMPANY IDENTIFICATION	
<b>Product Synonym</b>	ARDROX HF-P NDT Penetrant
<b>Chemical Formula</b>	Petroleum Ether, Kerosene
<b>Trade Name</b>	Afrox ARDROX HF-P 996-PB
<b>Product Package</b>	400 ml can
<b>Product Code</b>	W033570
<b>Company Identification</b>	African Oxygen Limited Grayston Office Park Building 7 128 Peter Road Sandown, Sandton, 2196 Tel. No: (011) 490-0400 Fax No: (011) 490-0530 Email: <a href="mailto:customer.service@afrox.linde.com">customer.service@afrox.linde.com</a> <a href="http://www.afrox.com">www.afrox.com</a>
<b>Emergency Numbers</b>	<b>0860 02 02 02 (Afrox)</b>

2. HAZARD IDENTIFICATION	
<b>Classification</b>	Classification under South African Hazardous Chemical Substances Regulations subsequently amended. (HCS) Classification under the Globally Harmonized System of classification and labelling of chemicals (GHS)
<b>Emergency Overview</b>	Colour: Dark red Odour: Petroleum Taste: Petroleum Physical State: Liquid
<b>Main Hazards</b>	Highly Flammable
<b>Adverse Health Effects</b>	Danger! highly flammable liquid and vapour. Vapour may cause flash fire. Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Affects central nervous system.
<b>Chemical Hazards</b>	ARDROX HF-P is Highly Flammable
<b>Biological Hazards</b>	Hazardous to the aquatic environment
<b>Vapour Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention
<b>GHS Classification</b>	Highly flammable liquid and vapour – Category 2 May be fatal if swallowed and enters airway - Category 1 Causes skin irritation - Category 2 Causes serious eye irritation – Category 2A Pressurise container: may burst if heated – Category 3 Suspected of damaging fertility or the unborn child – Category 2

	May cause damage to organs through prolonged or repeated exposure - Category 2 Toxic to aquatic life with long lasting effects – Category 2
<b>GHS Pictogram</b>	
<b>GHS Signal Words</b>	Danger
<b>GHS Hazard Statements</b>	<b>H222</b> Extremely flammable aerosol <b>H304</b> May be fatal if swallowed and enters airways <b>H315</b> Causes skin irritation <b>H319</b> Causes serious eye irritation <b>H229</b> Pressurise container: may burst if heated <b>H361</b> Suspected of damaging fertility or the unborn child <b>H336</b> May cause drowsiness or dizziness <b>H373</b> May cause damage to organs through prolonged or repeated exposure <b>H411</b> Toxic to aquatic life with long lasting effects
<b>GHS Precautionary Statements</b>	<b>Prevention:</b> <b>P210:</b> Keep away from heat/sparks/open flames/hot surfaces. No smoking <b>P211:</b> Do not spray on an open flame or other ignition source <b>P251:</b> Do not pierce or burn, even after use <b>P233:</b> Keep container tightly closed <b>P240:</b> Ground/Bond container and receiving equipment - if electrostatically sensitive material is for reloading. - if product is volatile so as to generate hazardous atmosphere <b>P241:</b> Use explosion-proof electrical/ventilating/ lighting and equipment <b>P242:</b> Use only non-sparking tools <b>P280:</b> Wear protective gloves/clothing/eye protection/face protection <b>P243</b> Take precautionary measures against static discharge <b>P264:</b> Wash skin thoroughly after handling. <b>P261:</b> Avoid breathing fumes/gas/mist/vapours/spray <b>P271:</b> Use only outdoors or in a well-ventilated area <b>P201:</b> Obtain special instructions before use <b>P202:</b> Do not handle until all safety precautions have been read and understood <b>P273:</b> Avoid release to the environment  <b>Response:</b> <b>P305 + P351 + P338:</b> IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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	<p><b>P370 + P378:</b> In case of fire: Use water spray for extinction</p> <p><b>P301 + P310:</b> IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p><b>P303 + P361 + P353:</b> IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p><b>P337 + P313:</b> If eye irritation persists: Get medical advice/attention</p> <p><b>P331:</b> Do NOT induce vomiting</p> <p><b>P302 + P352:</b> IF ON SKIN: Wash with plenty of water</p> <p><b>P321:</b> Specific treatment refer section 4 first aid measures</p> <p><b>P332 + P313:</b> If skin irritation occurs: Get medical advice/attention</p> <p><b>P362 + P364:</b> Take off contaminated clothing and wash it before reuse</p> <p><b>P304 + P340:</b> IF INHALED: Remove person to fresh air and keep comfortable for breathing</p> <p><b>P312:</b> Call a POISON CENTRE/doctor if you feel unwell</p> <p><b>P308 + P313:</b> IF exposed or concerned: Get medical advice/attention</p> <p><b>P391:</b> Collect spillage</p> <p><b>Storage:</b></p> <p><b>P410 + P412:</b> Protect from sunlight. Do no expose to temperatures exceeding 50°C</p> <p><b>P403:</b> Store in a well-ventilated place</p> <p><b>P233:</b> Keep container tightly closed</p> <p><b>P235:</b> Keep cool</p> <p><b>P405:</b> Store locked up</p> <p><b>Disposal:</b></p> <p><b>P501:</b> Dispose of contents/container to hazardous or special waste collection point</p>
<b>Other Hazards that do not result in classification</b>	None

4. FIRST AID MEASURES	
<b>Eye contact</b>	Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids
<b>Skin Contact</b>	Wash with soap and water. Get medical attention if irritation develops
<b>Ingestion</b>	Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention. Have conscious person drink several glasses of water
<b>Inhalation</b>	Very hazardous in case of inhalation. Allow the victim to rest in a well-ventilated area. Seek immediate medical attention. If the victim is not breathing, perform mouth-to-mouth resuscitation

5. FIRE-FIGHTING MEASURES	
<b>Suitable extinguishing media</b>	COMBUSTIBLE SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Do not use water jet. Use DRY chemical powder, CO2, water spray or foam
<b>Unsuitable extinguishing media:</b>	Do not use water jet
<b>Specific Hazards</b>	This ARDROX HF-P fluid is extremely flammable. When handling the liquid, rubber gloves and eye protection should be worn AEROSOLS: In a fire, beware of exploding aerosols cans. Container explosion may occur under fire conditions or when heated. Vigorously supports combustion. The vapour is heavier than air and may spread over a wide area leading to the risk of remote ignition and flashback. The aerosol package comprises the product and a non-flammable propellant in a pressurised container
<b>Special fire fighting procedures:</b>	None required. This product is flammable. Remove containers from the vicinity of the fire if safe to do so. Keep containers cool that cannot be removed. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
<b>Special protective equipment for firefighters:</b>	Be sure to use an approved / certified respirator or equivalent Eye protection and protective gloves should be worn when handling the product for lengthy periods of time.

### 3. COMPOSITION OF INGREDIENTS

<b>Chemical name</b>	<b>Petroleum Ether</b>
<b>Chemical family</b>	
<b>CAS No</b>	8032-32-4
<b>UN No</b>	1268
<b>ERG No</b>	128
<b>Hazard class</b>	3
<b>Hazchem Warning</b>	F1 Flammable
<b>Chemical name</b>	<b>Kerosene</b>
<b>Chemical family</b>	
<b>CAS No</b>	8008-20-6
<b>UN No</b>	1223
<b>ERG No</b>	128
<b>Hazard class</b>	3
<b>Hazchem Warning</b>	F1 Flammable

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6. ACCIDENTAL RELEASE MEASURES	
<b>Personal precautions.</b>	Eye protection and protective gloves should be worn when handling the product for lengthy periods of time Splash goggles, Overalls, Boots
<b>Environmental Precautions</b>	Eliminate all ignition sources. Contain the spillage to prevent entry into drains or waterways
<b>Methods and material for containment and cleaning up:</b>	Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Notify the local authority if a spillage of large quantity into drains or waterways occurs Call for assistance on disposal

7. HANDLING AND STORAGE	
<b>Safe Handling</b>	<u>Handling:</u> 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. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids. <u>Storage:</u> Store in a cool, dry, well-ventilated area, out of direct sunlight. Use a "First in-First-Out" inventory system to prevent full containers being stored for excessive periods of time. Keep out of reach of children.
<b>Conditions for safe storage, including any incompatibilities</b>	Exposure to excessive heat for prolonged periods Ensure good stock rotation practices.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION	
<b>Occupational Exposure Hazards (HCS)</b>	SA - No data available
<b>Engineering Control Measures</b>	Ventilation should be provided. Ensure that eye wash stations and safety showers are proximal to the work-station location

<b>Personal Protection</b>	Eye protection and protective gloves should be worn when handling the product for lengthy periods of time
<b>Eyes</b>	Safety glasses
<b>Hands</b>	Protective gloves
<b>Body protection:</b>	Overalls
<b>Feet</b>	Safety Shoes

9. PHYSICAL AND CHEMICAL PROPERTIES	
<b>Chemical Name</b>	ARDROX HF-P
<b>Chemical Symbol</b>	C <sub>n</sub> H <sub>2n+2</sub>
<b>Physical state</b>	Liquid
<b>Form:</b>	Liquid
<b>Colour:</b>	Clear red liquid
<b>Odour:</b>	Petroleum odour
<b>Odour Threshold:</b>	>1ppm
<b>pH:</b>	Neutral
<b>Density</b>	0.85 to 0.87g/cm <sup>3</sup>
<b>Melting Point:</b>	<-10°C
<b>Boiling Point:</b>	100°C
<b>Sublimation Point:</b>	No data
<b>Critical Temp. (°C):</b>	No data
<b>Flash Point:</b>	>55°C
<b>Evaporation Rate:</b>	No data
<b>Flammability (solid, gas):</b>	Flammable liquid
<b>Flammability limit - upper (%):</b>	5.9%
<b>Flammability limit - lower(%):</b>	1.1%
<b>Vapour density 20°C:</b>	3.58g/l
<b>Liquid density</b>	0.85 g/cm <sup>3</sup> @20°C
<b>Relative density water=1:</b>	0.85
<b>Solubility(ies)</b>	Miscible with hydrocarbons and halogenated hydrocarbons.
<b>Solubility in Water:</b>	Not soluble in water
<b>Partition coefficient (n-octanol/water):</b>	No data
<b>Autoignition Temperature:</b>	229°C
<b>Decomposition Temperature:</b>	No data
<b>Viscosity</b>	
<b>Kinematic viscosity:</b>	Not available
<b>Dynamic viscosity:</b>	No data
<b>Explosive properties:</b>	Not applicable
<b>Oxidising Properties:</b>	Not applicable
<b>Molecular weight</b>	Not available

10. STABILITY AND REACTIVITY	
<b>Reactivity</b>	Not reactive under normal conditions
<b>Chemical stability</b>	Stable under normal conditions
<b>Possibility of hazardous reactions</b>	No data
<b>Conditions to avoid</b>	Open flame and electrical discharge

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<b>Incompatible Materials</b>	Reactive with oxidizing agents, acids, alkalis
<b>Hazardous Decomposition of Products</b>	Carbon oxides (CO, CO2) nitrogen oxides (NO, NO2).

11. TOXOLOGICAL INFORMATION	
<b>Acute Toxicity</b>	Very hazardous in case of inhalation Acute oral toxicity (LD50): >2400mg/kg (Rat – Weighted average theoretically calculated). Acute dermal toxicity (LD50): >2000mg/kg(Rat). (KEROSENE, dearomatized). Acute toxicity of the vapour (LC50): 5000mg/m3 4 hours (Rat). (KEROSENE, dearomatized)
<b>Skin &amp; eye contact</b>	Irritating to skin seek medical help immediately.
<b>Chronic Toxicity</b>	Very hazardous in case of ingestion Repeated skin exposure can produce local skin destruction, or dermatitis.
<b>Carcinogenicity</b>	Classified 2A (Probable for human) by IARC (Kerosene).
<b>Mutagenicity</b>	No data
<b>Reproductive Hazards</b>	No data

12. ECOLOGICAL INFORMATION	
<b>Toxicity</b>	OSHA 50 ppm 8hr weighted ave Harmful to aquatic life in high concentrations
<b>Persistence and degradability</b>	Expected to be slowly biodegradable. Possibly hazardous short-term degradation products are not likely. Products of biodegradation: Oxidises rapidly by photochemical reactions in air
<b>Bioaccumulative Potential Product</b>	No data
<b>Mobility in soil</b>	No data
<b>Results of PBT and vPvB assessment</b>	No data
<b>Other adverse effects</b>	No data
<b>Effect on ozone layer</b>	No data
<b>Effect on the global warming (CO2=1)</b>	No data

13. DISPOSAL CONSIDERATIONS	
<b>Disposal Methods</b>	Prevent entry into waterways, sewers and confined areas: dike if necessary. Aerosol cans (used or unused) should be disposed

	of, without puncturing, via a licensed waste disposal contractor. Product must be removed by a reputable waste disposal company. Recover or recycle, if possible, otherwise incineration. Aerosol cans (used or unused) should be disposed of, without puncturing, via a licensed waste disposal contractor.
<b>Disposal of Packaging</b>	DO NOT RE-USE CONTAINERS. Puncture packaging all plastic containers. Flatten all metal containers. Shred all polywoven bags. As per regulation for aerosol cans.

14. TRANSPORT INFORMATION	
<b>Road Transportation</b>	
<b>UN No.</b>	1950
<b>Shipping Name</b>	ARDROX HF-P
<b>ERG No.</b>	128
<b>Class</b>	2
<b>Subsidiary Risk</b>	Highly Flammable & Toxic
<b>Hazchem Warning</b>	Flammable aerosol
<b>IMDG</b>	
<b>IMDG</b>	1950
<b>Shipping Name</b>	ARDROX HF-P
<b>ERG No.</b>	128
<b>Class</b>	2
<b>Subsidiary Risk</b>	Highly Flammable & Toxic
<b>Label</b>	Flammable aerosol
<b>ICAO/IATA Code</b>	
<b>ICAO/IATA Code</b>	None
<b>Class</b>	3
<b>Packing Group:</b>	None
<b>Packaging instructions</b>	Passenger 75 kg Cargo 150 kg

15. REGULATORY INFORMATION	
<b>EEC Hazard class:</b> <b>National legislation OHSact and Regulations 85 of 1993</b>	
<b>SANS 10228:2012 Edition 6</b>	The identification and classification of dangerous goods for transport by road and rail modes
<b>SANS 10234:2019 Edition 2</b>	Globally Harmonized System of classification and labelling of chemicals (GHS)
<b>SUPPLEMENT TO SANS 10234 Edition 1</b>	List of classification and labelling of chemicals in accordance with the Globally Harmonized System (GHS)
<b>SABS 0238 (SANS 1238)</b>	Welding and Thermal Cutting Process

16. OTHER INFORMATION	
Ensure all national/local regulations are observed. Ensure users and relevant persons understand the hazard Regularly check supplier's information sources for updated versions of SDS's	
<b>Revision Date</b>	31/08/2023 v01

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### **Bibliography**

Perry Chemical Engineering 6<sup>th</sup> Edition  
SANS 11014 - Safety data sheet for chemical products:  
Content and order of sections  
SANS 10234 - List of classification and labelling of chemicals  
in accordance with the Globally Harmonized System (GHS)  
SANS 10265 – Classification and Labelling of Dangerous  
Substances

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