

AFROXPAC SELF-CONTAINED SELF-RESCUER (SCSR) 35i

DATE: October 2018

Version 2

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Ref. No.: MS029

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name Afropac Self-Contained Self-Rescuer (SCSR)

Synonym Oxygen Generator

Trade Name Afropac Self-Contained Self-Rescuer 30+/35

Company Identification African Oxygen Limited
23 Webber Street
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EMERGENCY NUMBER **0860 020202 or 0860111185**
(24 hours)

Use(s) The Afropac Self-Contained Self-Rescuer SCSR is an oxygen generator that is designed to facilitate escape from irrespirable atmospheres e.g. an underground fire in the case of mining or tunnelling.

Biological Hazards Unknown.

Vapour Inhalation. Unknown Inhalation of potassium superoxide can cause chemical burns to the respiratory tract. Inhalation of lithium hydroxide can cause severe irritation of the tissues of the respiratory tract.

Eye/skin Contact Contact with potassium superoxide and lithium hydroxide may cause irritation, or inflammation or severe burns.

Ingestion Ingestion of potassium superoxide and lithium hydroxide can lead to irritation and chemical burns of the gastrointestinal tract.

2 COMPOSITION/INFORMATION

TABLE: COMPOSITION DATA (WT % of total device (2350 g) and of active chemicals contained in the device)

Hazardous Ingredients	wt% of chemicals only	wt% of total device	UN No.	CAS No.
SCSR CHEMICALS				
Potassium Superoxide	83.3	14.0	2466	12030-88-5
Lithium Hydroxide	16.7	2.8	2680	7440-47-3
GAS GENERATED				
Oxygen	-	-	1072	7782-44-7

UN No. (SCSR) 3356
Hazchem Warning Oxygen generator

3 HAZARDS IDENTIFICATION

Main Hazards The hazardous chemicals are safely contained in the device, which has been designed to withstand harsh underground mining conditions. If the protective container is opened small amounts of oxygen will be released as the chemical reacts to the moisture in the air – this process is very slow if not accelerated by actually donning the unit and breathing through it.

Adverse Health Effects There are no recognized hazards associated directly with unused Afropac SCSR. If the SCSR is damaged in such a way that the chemical canister ruptures exposing and/or spilling chemicals, adverse health effects are as for the chemicals themselves.

Chemical Hazards Potassium superoxide is a strong oxidiser (rating 5.1) and lithium hydroxide is a corrosive solid (Rating 8).

4 FIRST AID MEASURES

Prompt medical attention is mandatory in all cases of severe overexposure to the chemical contents in the Afropac SCSR.

An unopened Afropac SCSR or an opened Afropac SCSR where the internal contents are still intact poses no danger to health and safety. If the SCSR is damaged in such a way that the chemical canister ruptures exposing and/or spilling the chemicals, first aid measures are to be followed as for the chemicals themselves.

Eye/Skin Contact: Irrigate thoroughly with water for at least 15 minutes and obtain medical attention.

Ingestion Wash out the mouth thoroughly using copious amounts of water. DO NOT induce vomiting. Obtain medical attention.

Inhalation Move person to fresh air and give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration. Obtain medical attention.

5 FIRE FIGHTING MEASURES

Extinguishing Media Use a dry powder fire extinguisher.

Specific Hazards Water must NOT be used to extinguish the fire, as water will react with any exposed oxidizing chemical content of the Afrox Self-contained Self-rescuer, leading to the generation of oxygen. This could result in localised oxygen-enrichment of the atmosphere thus potentially promoting combustion.

Emergency Actions If possible, remove all containers from the vicinity of fire. Do not use water to cool the containers. Evacuate the area. CONTACT THE NEAREST AFROX BRANCH OR THE SUPPLIER.

Protective Clothing Approved hazardous dust respirator, safety goggles, rubber gloves and overalls.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Do not enter any area where Potassium Superoxide has been spilled unless safe to do so.

Environmental Precautions

Do not allow the chemical contents to enter the environment or sewers.

Large/Small Spills

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Contain the Afrox Self-contained Self-rescuer apparatus and any material in a clean and dry container (a steel bin is recommended) and cover. Provided there is no fire, wash down spillage area with large amounts of water whilst ensuring good ventilation to dissipate any excess oxygen.

7 HANDLING AND STORAGE

Handling When sealed in its protective stainless steel container, the Afroxpac Self-contained Self-rescuer can be handled without any special personal protective equipment.

Storage Storage of the device should be in a clean and dry environment away from direct heat and sunlight. The preferred temperature range is -10 to 55 °C.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Hazards

Keep containers closed.

Engineering Control Measures

Not applicable.

Personal Protection

Use an approved hazardous dust respirator, safety goggles, rubber gloves and overalls in the event of exposure of the chemicals contained in the AfroxPac Self-Contained Self-Rescuer.

9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Colour	Metallic (stainless steel) protective casing engraved with identification information.
Taste	None.
Odour	None.

10 STABILITY AND REACTIVITY

Conditions To Avoid

In a situation where the unit gets badly damaged by some event causing the chemicals to be exposed or spill from it, the following hazards can occur; if in contact with moisture, the exposed chemicals could start reacting and release oxygen in fairly large amounts (up to 100 litres per SCSR). This reaction is exothermic and generates heat.

Incompatible Materials

Substances incompatible with the exposed chemicals are: acids, oxidising materials, organic materials, reducing agents and combustibles all of which could potentially result in a fire.

Hazardous Decomposition Products

There are no hazardous decomposition products from the oxygen generator; only oxygen which supports combustion is produced from the decomposition of the chemicals in the generator. When reacted with water, potassium superoxide produces oxygen and potassium hydroxide as a by-product. Potassium hydroxide is a highly alkaline substance and must be dealt with accordingly.

11 TOXICOLOGICAL INFORMATION

Detailed toxicological information is contained in the material safety data sheets for the active chemical contents of the device.

12 ECOLOGICAL INFORMATION

The SCSR chemicals pose a potential hazard to the ecology. Detailed ecological information is contained in the **material safety data sheets for these**. The material is highly alkaline and must be disposed of safely.

13 DISPOSAL CONSIDERATIONS

General

Do not discharge into any place where its accumulation could be dangerous. Do not discharge the chemical contents into sewers. Waste disposal must be in accordance with appropriate national, state or local regulations. Contact Afrox or the relevant supplier if guidance is required.

14 TRANSPORT INFORMATION

UN No.	3356
ERG No	140
Hazchem warning	Oxygen generator

15 REGULATORY INFORMATION

This device is an oxygen generator and there is no regulatory information known. However the device is classified as an "article" as defined in American legislation "29 CFR 19100.1200 (b)(6)(v) -July 1, 1995". 'Articles' do not require MSDS.

SANS 10234
OHSAct and Regulations 85 of 1993

16 OTHER INFORMATION

Bibliography

Handbook of Compressed Gases – 3rd Edition
Matheson. Matheson Gas Data Book – 6th Edition
SANS 10265 – Labelling of Dangerous Substances
American legislation "29 CFR 19100.1200 (b)(6)(v) -July 1, 1995

EXCLUSION OF LIABILITY

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