BIOX '02' IMMERSION FLUID

CLEANING PROCEDURE FOR MIXED GAS AND OXYGENATED BREATHING APPARATUS.

HEAD OFFICE:
BIOX Ltd,
52 Hughenden Avenue,
High Wycombe,
Bucks.
HP13 5SJ
Tel: 07041 484125
Fax: 07041 484125
Email:bioxint@yahoo.co.uk
Web: www.bioxint.com

NB: The enclosed information has been carefully prepared and all recommendations or suggestions are made in good faith but without guarantee, since the conditions and method of application are out of our control.

BIOX ' 02' OXYGEN CLEANING IMMERSION FLUID

CLEANING OXYGEN AND MIXED GAS COMPONENTS OF DIVING AND BREATHING APPARATUS.

General Description

Biox is a biological oxide. tarnish. verdigris remover used for oxygen cleaning and is the result of ten years research in the field of Biochemistry to produce a safe, non-toxic. non flammable cleaning fluid.

Biox is soluble in water in all proportions :

Colour	-	clear
Density	-	1.02 SG
Odour	-	very slight organic odour
pH	-	2.2
Boiling point	-	96 C.

Use

BIOX should be used in a plastic. fibre glass or stainless steel container.

BIOX must not be used below 4 C.
The process of cleaning is accelerated when the component being cleaned is warmed in the fluid.

BIOX can be reused many times until its working life eventually becomes exhausted, this is best judged by observation.

BIOX has an evaporation rate approximately the same as water.

BIOX does not contain strong solvents therefore layers of grease or wax on the surface should be removed to avoid retarding the process.

BIOX may react strongly with Sodium Nitrite. It is however. possible to use Sodium Nitrite in small

Packaging Handling First Aid and Storage

BIOX is supplied in 5 and 25 litre plastic containers.

BIOX should be stored securely in dry area. Keep containers closed when not in use.

BlOX should not be stored below 0 C.

Recommended storage limit in opened containers is 1 year.

Long term exposure dries the skin and can cause minor skin reactions either as a result of long term exposure or in the case of persons susceptible to allergic or skin sensitivity reactions.

Spillage's and leakage's should be rinsed away using copious amounts of clean water to avoid slipping.

BIOX can corrode cement and iron following long periods of exposure.

BIOX can be neutralised by adding Sodium Bicarbonate (Baking Soda).
6% raises pH to 5.5, 9% raises pH to 7.0 and can be disposed of by flushing down sewer with water.

Applications

(A) Soaking.

Light rust or tarnish may be removed in minutes, heavily soiled brass, chrome plate, stainless steel and miscellaneous rubber components can be immersed for longer period of time and should be subject to regular inspections to check removal progress.

Stripped down components, valves, regulators and associated pipe work may be immersed over night to remove corrosion and verdigris.

Upon completion of cleaning process and prior to re-assembly ensure that all components are thoroughly rinsed in fresh potable (drinking) water

B) Ultrasonic Cleaning

The combination of BIOX and ultrasonic energy provide today's most effective, safe, fast removal of corrosion, tarnish, verdigris and contaminants.

THE PREFERRED METHOD is to preheat the BIOX to approximately 50 C. in the ultrasonic cleaning tank, then immerse items to be cleaned in the heated BIOX for approximately five minutes, thereafter make frequent inspections to check the completion of the cleaning cycle. BIOX should then be drained from the tank and replaced with potable water and the components ultrasonically rinsed for approximately five minutes. Blow dry components with diving mixture gas.

Inspection

Following the cleaning process of oxygen and or mixed gas components the items are to be inspected using an ultraviolet lamp, which should be warmed up for at least ten minutes, following which, the components must be inspected for hydrocarbon deposits.

NOTE
Hydrocarbon deposits will show up under the ultraviolet light as a bright blue patch. Should this occur, carry out another cleaning cycle if still not clean replace BIOX solution and repeat cleaning procedure.

All components that are not immediately assembled are to be packed as stated in the following respective paragraphs.

Handling, Preservation and Packaging

Procedures for handling, preservation and packing of cleaned components are as follows:

Handling

Cautions

1. Operators must ensure that gloves are worn before and during the following operations.

2. Packaging material damaged during packing must not be used.

3. Packing material must be free from contamination.

4. Care is to be taken when handling packed and sealed components to maintain the integrity of the sealing and packaging.

5. Gloves must be worn when removing oxygen clean items from their packaging for use.

6. Any item in an open or damaged package is NOT to be used for oxygen service. Such items are to be considered contaminated and must NOT be used until they have been oxygen cleaned.

Preservation

No preserving medium is to be used on oxygen clean items.

Packaging

Items must be packaged and sealed observing the following points.

(1) Items cleaned for oxygen use are to have their apertures carefully sealed. Any internal fitted plastic bungs, tape or methods of sealing apertures that may lead to material becoming lodged inside the apertures must NOT be used.

(2) Oxygen clean items must be sealed in two polyethylene self-sealing bags with an Oxygen Warning Label placed between the layers.

Storage

Packages containing cleaned items are to be visually inspected immediately prior to use

If the package or package sealing of a cleaned item is found to be damaged, defective or inadequate and any doubt is raised regarding the integrity of the sealing arrangements, then the item is NOT to be used.

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