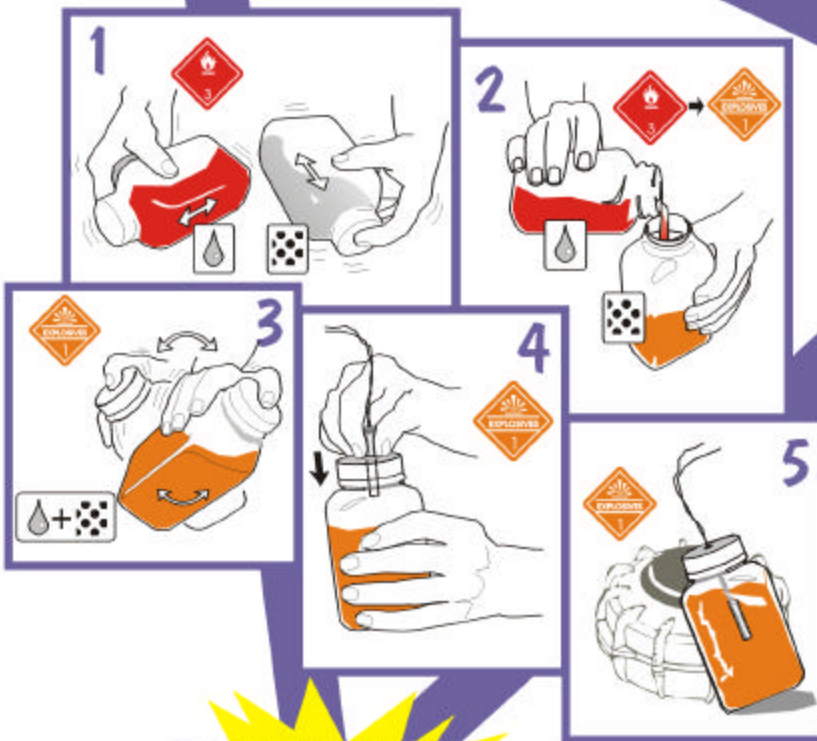
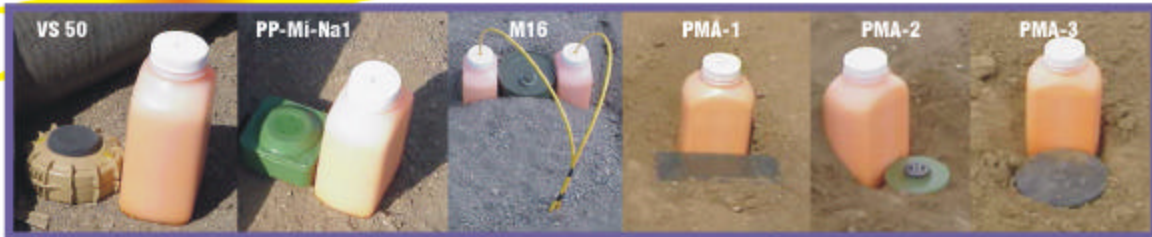


# FIXOR™

## AN ECONOMICAL DEVICE TO NEUTRALIZE LANDMINES AND UXO

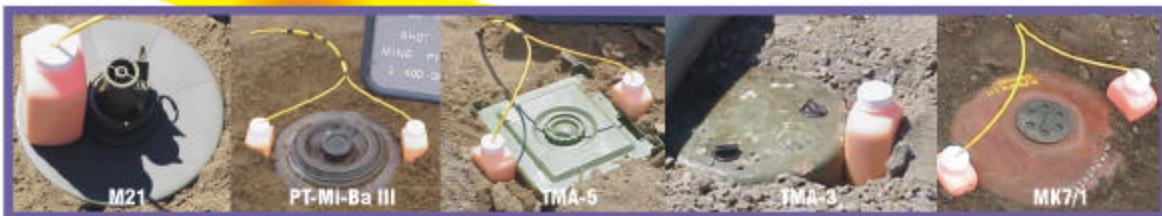
### ANTI-PERSONNEL MINES



### OTHER ORDNANCE



### ANTI-TANK MINES



**MREL SPECIALTY EXPLOSIVE PRODUCTS LIMITED**

1555 Sydenham Road • Kingston, Ontario K7L 4V4 • Canada

## FIXOR™ DESCRIPTION

FIXOR™ is comprised of two plastic bottles. One bottle contains **FIXOR™ Liquid** (flammable liquid); the other bottle contains **FIXOR™ Powder** (inert powder). When the FIXOR™ Liquid is poured into the bottle containing the FIXOR™ Powder, and the bottle is shaken, a detonator sensitive **FIXOR™ Explosive** is formed. Unlike ammonium nitrate based two-component explosives and traditional explosives, FIXOR™ Explosive **self-neutralizes** after a period of time, becoming a non-explosive. This unique characteristic of FIXOR™ is very important to those Customers concerned with the proliferation of explosives-based terrorist devices. Unlike ammonium nitrate based two-component explosives and traditional explosives, FIXOR™ can be transported around the world by any method, including commercial passenger aircraft. This makes FIXOR™ **rapidly available** to those Customers who require demolition explosives quickly. FIXOR™ has been **proven effective** at destroying a large variety of anti-personnel and anti-tank landmines as well as unexploded ordnance (UXO). Complete information on FIXOR™ is available at [www.FIXOR.com](http://www.FIXOR.com). A CD-ROM containing an mpeg video of FIXOR™ being mixed and detonated is available. Contact MREL or your Authorized FIXOR™ Representative for more details on FIXOR™.

## FIXOR™ LIQUID PROPERTIES

<b>Part Number</b>	FIXOR-L-500ML-1	<b>NATO Stock Number</b>	1375-21-920-4587
<b>TDG Classification and Authority</b>	Transport of Dangerous Goods (TDG): Class 3 Flammable Liquid, UN 2842. Packing Group III. Chief Inspector of Explosives, Explosives Regulatory Division, Natural Resources Canada, Government of Canada.		
<b>Colour</b>	Red.	<b>Health/Environmental Concerns</b>	Use in ventilated areas or outdoors. Material Safety Data Sheet (MSDS) supplied.
<b>Inner Packaging</b>	500-ml plastic bottle with removable plastic lid. L x W x H: 76 x 57 x 152 mm (3 x 2 ¼ x 6 in.).	<b>Shelf Life</b>	Indefinite.
<b>Outer Packaging</b>	Cardboard Box. Complies with UN requirements for commercial air transport of flammable liquids. UN Approved 4GV/X22.7/S/99. 24 ea. FIXOR™ Liquid bottles per box. Box dimensions = 60.3 x 38.1 x 26.2 cm (23.75 x 15 x 10.25 in.). Gross weight per box = 14 kg (30.9 lbs.). Net weight of Dangerous Goods (flammable liquid) per box = 8.5 kg (18.7 lbs.).		
<b>Pallet Packaging</b>	20 ea. boxes of FIXOR™ Liquid per wooden pallet. Shrink-wrapped and labeled in accordance with TDG regulations. Pallet dimensions = L x W x H: 122 x 102 x 132 cm (48 x 40 x 52 in.). Gross weight per pallet = 300 kg (661 lbs.). Net weight of Dangerous Goods (flammable liquid) per pallet = 170 kg (375 lbs.).		
<b>Shipping/storage</b>	Ship and store pallets and boxes of FIXOR™ Liquid in accordance with regulations for the shipping and storage of flammable liquids.		

## FIXOR™ POWDER PROPERTIES

<b>Part Number</b>	FIXOR-P-500ML-1	<b>NATO Stock Number</b>	1375-21-920-4638	<b>Classification</b>	Inert powder, not subject to TDG regulations.
<b>Colour</b>	White/orange.	<b>Health/Environmental Concerns</b>	None. Material Safety Data Sheet (MSDS) supplied.		
<b>Inner Packaging</b>	500-ml plastic bottle with removable plastic lid. L x W x H: 76 x 57 x 152 mm (3 x 2.25 x 6 in.).	<b>Shelf Life</b>	Indefinite.		
<b>Outer Packaging</b>	Cardboard Box. 24 ea. FIXOR™ Powder bottles per box. Box dimensions = 50.8 x 24.8 x 16.5 cm (20 x 9.75 x 6.5 in.). Gross weight per box = 2.5 kg (5.6 lbs.).				
<b>Pallet Packaging</b>	40 ea. boxes of FIXOR™ Powder per wooden pallet. Shrink-wrapped. Pallet dimensions = L x W x H: 122 x 102 x 150 cm (48 x 40 x 59 in.). Gross weight per pallet = 123 kg (271 lbs.).				
<b>Shipping/storage</b>	The shipping and storage of pallets and boxes of FIXOR™ Powder are not regulated. For added security, store FIXOR™ Powder under lock and key, and separately from FIXOR™ Liquid.				

## FIXOR™ EXPLOSIVE PROPERTIES

<b>Classification and Authority</b>	Class 1.1D explosive. Charges, demolition UN 0048. Chief Inspector of Explosives, Explosives Regulatory Division, Natural Resources Canada, Government of Canada.						
<b>Colour</b>	Orange.	<b>Net Explosive Weight</b>	400 g (0.09 lbs.).	<b>Density</b>	0.9 g/cc.	<b>Detonation Velocity</b>	4,300 m/s (14,100 ft./sec.).
<b>TNT Equivalency</b>	85% by weight (as determined by air-blast tests).		<b>Operational Temperature Range</b>	At least -20° to +40° C.			
<b>Operational Time</b>	Detonate within 2 hours of mixing, or remix by shaking before detonating.			<b>Shelf Life</b>	Indefinite.		
<b>Initiation</b>	Knotted detonating cord, or detonating cord with "crimp-on" detonators, or "#8" detonators which contain at least 0.8 g of base charge.						

Authorized FIXOR™ Representative:



Information and suggestions herein are based on MREL's extensive experience and are offered only as a helpful guide for the consumer of demolition materials. Because FIXOR™ is used under varying conditions, over which MREL has no control, MREL does not guarantee the results of use of FIXOR™ nor does MREL assume any liability connected therewith. For additional information, please contact MREL or your Authorized FIXOR™ Representative.



## SOME ADVANTAGES OF FIXOR™

- FIXOR™ has been **proven effective** at neutralizing a large variety of Anti-Tank and Anti-Personnel landmines and UXO. The largest UXO neutralized to date is a 500 lb Mk 82 bomb. Neutralization when using FIXOR™ is achieved by sympathetic detonation of the main explosive charge. This neutralization completely destroys the landmine or UXO.
- FIXOR™ is **less expensive** than traditional explosives, particularly when shipping and storage of explosives are considered.
- FIXOR™ is **logistically smart**. Because FIXOR™ is not shipped as an explosive, it can be delivered relatively easily and inexpensively to all regions of the world. In fact FIXOR™ has been delivered to regions of the world to which delivery of explosives would be nearly impossible. For example, countries in need such as the Democratic Republic of Congo, Eritrea and Ethiopia.
- FIXOR™ is an **unlikely target for misuse** in booby-trap or terrorist devices when compared to traditional explosives such as C-4 and TNT. When FIXOR™ explosive is mixed, it remains an explosive for approximately 2 hours. After this time the two FIXOR™ components separate and the FIXOR™ is no longer an explosive, unless it is re-mixed by shaking.
- FIXOR™ is **easily and safely deployable** by EOD Specialists and indigenous deminers. These personnel are familiar with using explosives to destroy landmines and UXO, and FIXOR™ operates under the same principles as traditional explosives to destroy landmines and UXO.
- FIXOR™ has **no requirement for ongoing field technical support**.
- FIXOR™ is **fully functional in all demining operating conditions** around the world.
- FIXOR™ is effectively a **“green” explosive**. FIXOR™ presents no hazard to the EOD Specialists, indigenous deminers, or to the environment.
- **All components of FIXOR™ can be used** – there is no waste. The empty FIXOR™ Liquid bottle can be washed and can be distributed for carrying water. The vermiculite used in each box of FIXOR™ Liquid is an ideal building insulation.