



HELIX™ - High Energy Liquid Explosive

HELIX™ High Energy Liquid Explosive is a powerful and versatile liquid explosive which eliminates the logistical difficulties usually encountered in shipping and storing high explosives. HELIX™ is sold as two components, the liquid and the activator, each of which can remain in long term storage. When mixed, HELIX™ is a detonator sensitive, high explosive with high gas volume, high bulk energy and consistent detonating velocity.

APPLICATION:

- Breaching
- Explosive ordnance disposal
- General demolition
- IED defeat

KEY FEATURES:

- Non-explosive until mixed
- Mixes and arms instantly
- Easy to use
- Adaptable
- Non-explosive shipping and storage classification
- Reduced logistics cycle
- Ready to ship
- Easy disposal

PROPERTIES:

- Velocity: 6,400 m/s (21,000 f/s)
- Density: 1.3g/cc
- High bulk energy
- Thermally stable to 167°F (75°C)
- Low sensitivity to friction, impact and electrostatic discharge (ESD)

HELIX™ Liquid:
Flammable Liquid
UN 1261, 3.1

HELIX™ Activator:
Flammable Solid
UN1309, 4.1

HELIX™ - HIGH ENERGY LIQUID EXPLOSIVE

BINARY HELIX™ PART NUMBER	CONTAINER SIZE (NOMINAL)	PRODUCT DESCRIPTION	NET EXPLOSIVE WEIGHT (NOMINAL)	
			lb	kg
HELIX-STK-24	1.38" dia x 8" length (3.5 cm dia x 20.25 cm length)	Each case contains 24 charges; each charge consists of 1 bottle liquid and 1 bottle ("stick") activator, appr. 1/3 lb per charge (after mixing).	.33	.15
HELIX-LITER-8	0.4 Gallon (1.5 liters)	Each case contains 8 charges; each charge consists of 1 (1 liter) bottle and 1 (1 liter) bottle activator, appr. 2.2 lbs per charge (after mixing).	2.2	1
HELIX-GAL-4	1 Gallon (3.75 liters)	Each case contains 4 charges; each charge consists of 1 (1 gallon) bottle and 1 (1 gallon) bottle activator, appr. 8.8 lbs per charge (after mixing).	8.8	3.99

EBAD is able to tailor binary portions to meet most operational requirements.

OPERATION:

HELIX™ High Energy Liquid Explosive is supplied as a two component system. The flammable liquid and flammable solid are combined and mixed to form the high explosive formulation ready for use. HELIX™ is sensitive to No.8 strength detonators at ambient conditions as well as 50 g/ft (10 g/m) detonating cord. HELIX™ can also be supplied in breaching frames where only the flammable liquid needs to be added.

HELIX™ is suitable for use and can be utilized in multiple end items such as shaped charges, bulk charges, disrupters and common demolition configurations.



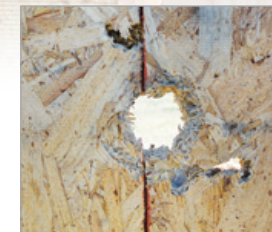
The liquid and the activator



HELIX™
Explosively Formed Projectile
(EFP)



Function



Post Function

ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY
640 HOPMEADOW STREET, P.O. BOX 429, SIMSBURY, CT 06070, USA www.EBAD.com

HELIX™ is a trademark of OMNI Distribution, Inc. This product and its components are protected under U.S. Patent Number 6,960,267.

Attention: The information and recommendations described in this brochure cannot possibly cover every application of the products or variation of conditions under which the products are used. The recommendations herein are based on the manufacturer's experience, research and testing. They are believed to be accurate, but no warranties are made, express or implied. In addition, the specifications contained herein are all nominal which represent our current production. The products described may be subject to change. Please feel free to contact Ensign-Bickford Aerospace & Defense Company for verification. No Warranties or Liabilities: THE PRODUCTS DESCRIBED HEREIN are sold "AS IS" and without any warranty or guaranty, express, or implied, arising by law or otherwise including without limitation any warranty of merchantability or fitness for a particular purpose. Buyer and user agree further to release and discharge seller from any and all liabilities whatsoever arising out of the purchase or use of any product described herein whether or not such liability is occasioned by seller's negligence or based upon strict products liability or upon principles of indemnity or contribution. Content©2022 Ensign-Bickford Aerospace & Defense Company, Simsbury, CT 06070, U.S.A.