

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.

This binary explosive is a pre-packaged product consisting of two separate components. These components typically are not listed separately on the List of Explosive Materials making it easier to transport.

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

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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.



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