



LF-2 Explosive

LF-2 is a sheet explosive specifically formulated for optimal performance in Reactive Armor Systems for combat vehicles. It is virtually insensitive to small arms bullet impact and fire but designed to react to high-velocity shaped charge jet stimuli. LF-2 has passed the full MIL-STD-2105 Insensitive Munition (IM) testing and has been formulated to self-extinguish once set aflame. It is type classified for use on various United States Military combat vehicle platforms.

APPLICATION:

LF-2 meets the unique performance characteristics of Reactive Armor applications. Through system-specific optimization, LF-2 provides the preferred performance and properties required by the United States Military. LF-2 is included in both legacy and future combat systems. Since it is a Plastic Bonded Explosive, it is waterproof and can be extruded and cut into most any design configuration. LF-2 is configured to match the complex geometries of unique Reactive Armor applications while maintaining very exacting dimensional tolerances.

PROPERTIES:

- Explosive concentration (%): 49–54
- Density (g/cc): 1.73–1.76
- VOD (m/s): 6,850–7,300
- Minimum propagation thickness: 0.079" (max)
- Flyer plate impact sensitivity :
NO GO <800 m/s min. 100% GO >1,500 m/s
- Flyer plate impact sensitivity tested at ambient and –40°F (-40°C)
- Hardness (Shore A): 56–80
- Extremely high surface ignition point:
No ignition at 1472°F (800°C)
- ESD threshold ignition level: >3.125 joules



MSDS No:
MSDSV10122/1

EX-9512032
Explosive, Blasting, Type D, UN0084
1.1D

LF-2 EXPLOSIVE

PART NUMBER	THICKNESS (NOMINAL)		ROLLS PER BOX	WEIGHT PER ROLL (NOMINAL)		ROLL LENGTH (REFERENCE)	
	in	mm		lb	kg	ft	m
D10895CA083-1	0.083	2.1	2	20	9.1	31.0	9.4
D10895CA125-1	0.125	3.2	2	20	9.1	20.6	6.2
D10895CA166-1	0.166	4.2	2	20	9.1	15.5	4.7
D10895CA208-1	0.208	5.3	2	20	9.1	12.4	3.7
D10895CA250-1	0.250	6.4	2	20	9.1	10.3	3.1
D10895CA291-1	0.291	7.4	2	20	9.1	8.8	2.7
D10895CA333-1	0.333	8.5	2	20	9.1	7.7	2.3

OPERATION:

The combination of low flammability and low impact sensitivity provides greater user safety and improved performance. Use of LF-2 not only reduces fire hazards but also eliminates the possibility of unwanted detonations. The low sensitivity characteristic greatly reduces the possibility of sympathetic detonations allowing the Reactive Armor designer to utilize thinner, lighter separators reducing parasitic weight, increasing the areas of coverage, and allowing for truly practical multi-hit designs. Reduced flammability eliminates the ignition of the explosive by small or medium caliber threats that would otherwise be defeated by the base armor.

CONSTRUCTION:

LF-2 is available in sheet forms that are highly flexible and easily cut to size while maintaining sufficient mechanical strength to permit considerable handling before and during armor assembly. EBAD can cut the LF-2 into any shape. LF-2 is water and fuel resistant, stable under a variety of conditions, and functional over a broad temperature range (six months at 160°F (71°C) with no change in properties). Similar results have been observed after underwater storage for six months. The explosive component of LF-2 is Ultrafine RDX produced by an EBAD proprietary direct recrystallization method. The unique crystal size and shape provides LF-2 with its excellent impact properties and ballistic performance.

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