



HMX

Explosives



HMX has a very high detonation speed and thermal stability. It is very stable and requires a powerful detonator or booster charge to detonate. HMX appears in four modifications, of which only the (3-modification displays a particularly high density and hence also a particularly fast detonation rate. Basic application of pure HMX is in the production of detonating cords and shock tubes which are thermally stable in temperatures up to 300 °C.

PRODUCT DESCRIPTION :

- Chemical name: Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
- Synonyms: Octogen, HMX, Cyclotetramethylene-tetranitramine
- Chemical formula: $C_4H_8N_8O_8$
- CAS number: 2691-41-0
- UN PSN: UN 0226 HMX, WETTED 1.1D



Phlegmatized HMX is used in the production of explosive charges for anti-aircraft missile projectiles, anti-tank rocket and artillery projectiles with explosive and cumulative effect as well as for oil well perforating charges. A mixture of HMX and a polymer adhesive, known as PBX, is used in the production of a new generation of cumulative rocket projectiles, the so-called insensitive munitions.

CHARACTERISTICS :

• Crystal Density, g/cm ³ :	1.908
• Detonation Velocity, m/s:	9.100
• Oxygen Balance, % (m/m):	-21.6
• Heat of Explosion, kJ/kg:	6.192
• Impact Sensitivity, N/m:	7,4
• Friction Sensitivity, N:	120

TECHNICAL SPECIFICATION :

• Content of HMX, % (m/m), min:	98
• Content of RDX, % (m/m), max:	2
• Insoluble in Acetone, % (m/m), max:	0.05
• Melting Point, °C, min:	277
• Content of Ash, % (m/m), max:	0.03
• Acidity as CH ₃ COOH, % (m/m), max:	0.02
• Particle Size:	large range

COMPOSITIONS BASEDON HMX :

Product	Ingredients	Content, % (m/m)
FO-4,5	HMX/Wax	95,5/4,5
FO-3,5 (OKOOJI-3,5)	HMX/Wax	96,5 / 3,5
H MX/Wax/Gra ph ite (OWC)	HMX/Wax/Graphite	94,5/4,5/1,0
HMX/Wax/Graphite (OWC)		
*for oil well perforating charges	HMX/Wax/Graphite	98,5/1,0/0,5
Octol 70/30 75/25	HMX/TNT	70/30 75/25
LX-14	HMX / Estane	95/5