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 densi-ty and hence also a particularly fast detonation rate. Basic application of pure HMX is in the production of deto-nating cords and shock tubes which are thermally stable in temperatures up to 300 °C.

PRODUCT DESCRITPION :

- Chemical name: Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
- Synonyms: Octogen, HMX, Cyclotetramethylene-tetranitramine
- Chemical formula: C4H8N808
- 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 cumu-lative 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 CH3COOH, % (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