For more than 10 years, our R&D teams perform research and development of new energetic substances to satisfy the future requirements of our customers. Leading worldwide specialist in the field of high explosives, EURENCO offers further new energetic molecules such as CL-20, manufactured thanks to its modern multipurpose units.

PRODUCT

- Trade name: CL-20
- Chemical name: hexanитrazaisowurzitane
- Chemical formula: C₆H₆N₁₂O₁₂
- Energetic solid ingredient based on a caged molecules with nitramine groups
- Particle sizes: 3 grades:
  - coarse: 150 µm
  - medium: 20/50 µm
  - fine: 5 µm
- Purity: > 95% (chemical/polymorph)

CHARACTERISTICS

- Melting point: 247 °C
- Density: 2.02 - 2.04 (HMX: 1.91)
- Heat of formation: 372 kJ/mole (HMX: 84 kJ/mole)
- Auto-ignition temperature: 220 °C
- Vacuum stability: < 1 cm³/g (100°C, 193h)
- Acidity: < 0.2 meq/100g
- Detonation velocity: 10 000 m/s
- Friction sensitivity (ISF): 80 N
- Impact sensitivity (ISI): 2 J

USES

According to its high heat of formation and density, CL-20’s performance is approximately 20% higher than standard explosives. The high burning rate is useful for high impulse energetic material for rocket motor applications like boosters. CL-20 is used as filler in rocket propellants, high explosives and high energetic aluminized and minimum smoke composite propellant manufacturing.