# Hexanitrostilbene – HNS
## (Heat-Resistant Explosive)

## Characteristics and Specifications

| HNS Type | HNS fine | HNS ultrafine acc. to STANAG 4170 | HNS granulated Low Bulk Density (LBD) | HNS granulated High Bulk Density (HBD) |
|---|---|---|---|---|
| **Melting point (°C)** (DSC 20 °C/min) | > 320 | > 320 | > 320 | > 320 |
| **Primary crystal size (µm)** | 30 - 100 | < 20 (at D90) | 35 - 75 | 35 - 75 |
| **Particle size** of agglomerates (%) | | | | |
| > 1.25 mm | --- | --- | ≤ 2 | ≤ 2 |
| < 0.30 mm | --- | --- | ≤ 4 | ≤ 4 |
| **Bulk density** (g/cm³) | 0.2 – 0.5 | --- | 0.65 – 0.70 | > 0.70 |
| **Specific surface area** (m²/g) | --- | > 5.0 | --- | --- |
| **Acidity** (%, as $HNO_3$) | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| **Alkalinity** (%, as NaOH) | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| **Vacuum stability** (ml / 2.5g) | | | | |
| 250 °C / 1h 15min | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| **Loss in weight** (%) | | | | |
| 150 °C / 16h | < 0.2 | < 0.1 | < 0.1 | < 0.1 |
| 260 °C / 1h | < 1.5 | < 1.0 | < 1.0 | < 1.0 |
| **Insoluble residue in DMF** (%) | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| **Hexanitrodibenzyl (HNBB)** (%) | < 0.5 | < 0.3 | < 0.3 | < 0.3 |
| **TNT** (%) | < 0.1 | < 0.1 | < 0.1 | < 0.1 |

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