



ONYX ADVISORY

PRODUCT SPECIFICATION SHEET

ONYX-SPEC-RDX / REV 1 / OCTOBER 2026

RDX (Cyclotrimethylenetrinitramine)

C₃H₆N₆O₆, CAS 121-82-4. Secondary high explosive, also known as hexogen or cyclonite, used as a munitions fill and in compositions such as Composition B and Composition C-4. Sourced to the buyer's specification, or to a recognised standard such as MIL-DTL-398 where the producer certifies to it.

CHEMICAL IDENTITY

Other names	Hexogen; cyclonite; T4; cyclotrimethylenetrinitramine
Formula / molar mass	C ₃ H ₆ N ₆ O ₆ / 222.12 g/mol
CAS / EC number	121-82-4 / 204-500-1
UN number	UN 0072, UN 0483 or UN 0391, by form
Appearance	White crystalline solid, odourless
Density	1.81 g/cm ³
Melting point	205.5 °C

TYPES AND CONDITIONING

Type I	Nitric-acid process. Typical HMX content 5% or less where the producer certifies to MIL-DTL-398
Type II	Acetic-anhydride process. HMX typically about 4–17% where the producer certifies to MIL-DTL-398
Conditioning	Dry, wetted with at least 15% water, or phlegmatised with wax

PACKAGING AND TRANSPORT

Packaging	Sealed UN-certified packaging for the assigned UN number: fibre or steel drums, or equivalent, with polyethylene liners
Transport	Typically Class 1.1D. UN 0072 when wetted with at least 15% water; UN 0483 when desensitised; UN 0391 when mixed with wax. Road and sea under ADR, RID and IMDG. Air only where IATA and the airline permit it

HAZARD IDENTIFICATION (TYPICAL, DRY)

Signal word	Danger
Hazard statements	H201, H301, H370, H373
Note	Wetted or phlegmatised material may carry a different transport class. The SDS for the supplied grade governs.

TYPICAL SPECIFICATION, TYPE I

Melting point	≥ 200 °C
Acidity, as HNO ₃	≤ 0.05%
US No. 60 sieve	≤ 5 insoluble particles
Acetone-insoluble	≤ 0.05%
Inorganic insoluble	≤ 0.03%
Impact, Kast	≤ 84%, where the producer certifies it
Granulation	Through US No. 20: 95–100%. No. 50: 70–100%. No. 100: 20–90%. Other classes to the buyer's sieve curve

Typical military-grade Type I limits. Each supply is certified against the specification agreed with the buyer.

DOCUMENTATION

Certificate of analysis	Per batch, as specified: appearance, melting point, acidity, insoluble matter, granulation, impact sensitivity
Safety data sheet	Accompanies every batch; available to verified buyers before order

COMMERCIAL TERMS

Minimum order	Quoted per requirement
Lead time	Quoted per requirement; governed largely by export authorisation in the producer's country
Incoterms	FOB, CFR or CIF
Payment	Through independent, regulated banks against agreed delivery conditions
Country of origin	Disclosed to verified counterparties

EXPORT CONTROLS

Licensing	Export authorisation in the producer's country; UK trade-control licensing where Onyx arranges supply between third countries
End use	End-user certificate signed by the end user, in the format prescribed by the producer's export authority, before any commitment

This sheet describes typical parameters for information and does not constitute an offer. Supply is subject to contract, export authorisation and end-user verification.