

COPPERHEAD CHEMICAL COMPANY

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Product Information Bulletin for:

TRIMETHYLOLETHANE TRINITRATE (METRIOL TRINITRATE)

Trimethylolethane Trinitrate (TMETN), also called Metriol Trinitrate (MTN), is a nitrate ester used in propellants and explosives. Stabilizers are optional, but ethyl centralite and 2NDPA are commonly used.

Physical Properties

Physical State	Oily liquid	Detonation Velocity	7050 m/s
Color	Colorless	Heat of Explosion	1122 cal/g
Chemical Formula	$\text{CH}_3\text{C}(\text{CH}_2\text{-ONO}_2)_3$	Heat of Combustion	2642 cal/g
Molecular Weight	255.15	Viscosity @ 20°C	156 cP
Specific Gravity @ 20°C	1.47	Soluble In	Acetone, ethyl ether, methanol, styrene, toluene, xylene
Freezing Point	-3°C	Solubility in Water @ 25°C	<0.015g/100g H ₂ O
Oxygen Balance as CO ₂	-34.5%		

Sensitivity and Stability

Impact	47 cm (2 Kg), 20" (PA apparatus)
Friction	Explodes, steel or fiber shoe
Explosion Temperature (5 Sec.)	235°C
Decomposition Temperature	182°C

Typical Specifications

Purity	98% minimum
Acidity/Alkalinity	0.002% maximum
Moisture	0.20% maximum
KI Stability (82.2°C)	10 minutes minimum

Please contact us regarding any special requirements.

Shipping Information

Designation	DOT Classification	Composition	Standard Packages
RXL 624	Substances, Explosive, n.o.s., Class 1.1D, UN0475, PGII	TMETN (Stabilizer Optional)	• 5 gallon inner packagings with a 1A2 outer packaging • 30 gallon inner packagings with a 1A2 outer packaging • Palletized drums or desiccators authorized under DOT-SP2709
RXL 624a	Substances, Explosive, n.o.s., Class 1.3C, UN0477, PGII	60/31/3 TMETN / Toluene / Stabilizer	

If you are looking for a responsive, reliable, and cost effective manufacturer, contact us at via telephone at (570) 386-6123 or via email at Sales@CopperheadChemical.com. For additional information and handing instructions, refer to the material safety data sheet.

Rev May 2011

FOR YOUR PROTECTION:

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