

COPPERHEAD CHEMICAL COMPANY

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Product Information Bulletin for:

BUTANETRIOL TRINITRATE (BTTN)

1,2,4-Butanetriol Trinitrate is used as an energetic material for rocket motors. It is sometimes conitrated or blended with NG or TMETN to form a mixed nitrate ester. BTTN is typically stabilized with 2NDPA and it is desensitized with methylene chloride for shipment. Other stabilizers, such as ethyl centralite, can be used.

Physical Properties

Physical State	Liquid	Oxygen Balance as CO ₂	-16.6%
Color	Clear yellow	Heat of Explosion	1358 cal/g
Chemical Formula	C ₄ H ₇ N ₃ O ₉	Heat of Combustion	2168 cal/g
Molecular Weight	241.12	Viscosity @ 25°C	59 cP
Specific Gravity @ 20°C	1.52	Soluble In	Acetone, ether, ethanol
Freezing Point	-27°C	Solubility in Water @ 20°C	0.08g/100g H ₂ O

Sensitivity and Stability

Impact	1 Nm
Explosion Temperature (5 Sec.)	230°C

Typical Specifications

Purity	97% minimum
Acidity/Alkalinity	0.002% maximum
Moisture	0.20% maximum
KI Stability (82.2°C)	10 minutes minimum

Shipping Information

Designation	DOT Classification	Composition	Standard Packages
RXL 623	Substances, Explosive, n.o.s., Class 1.1D, UN0475, PGII	80/20 BTTN / Methylene Chloride	• 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 1000	Substances, Explosive, n.o.s., Class 1.1D, UN0475, PGII	60/40 BTTN / Acetone	

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.

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FOR YOUR PROTECTION:

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