

RIOLINE™ & RIONEL™ LLF

Non-electric Lead Line & Starter

Previously ZIPLINE & ZIPDET STARTER

www.maxam-na.com



RIOLINE™ is used to initiate non-electric detonators.

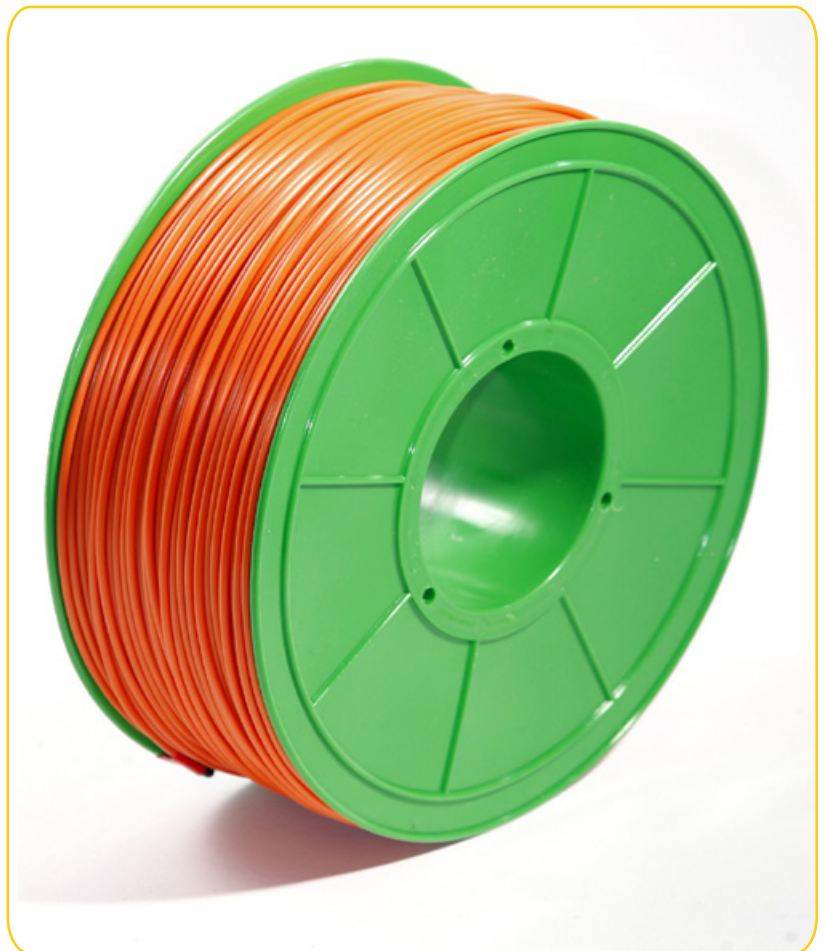
The RIOLINE™ lead line provides a high degree of safety in both underground and surface blasting applications.

RIOLINE™ is not affected by stray electrical currents, static electricity or extraneous energy found in normal mining and construction conditions.

RIONEL™ LLF includes a detonator and connector to facilitate shot initiation.

RIONEL™ LLF is designed to initiate one to four tubes.

RIONEL™ LLF is also available for detonating coordination.



Advantages

- Safe, reliable and user friendly
- Safe against extraneous electrical currents
- Can initiate up to four tubes in the connector block
- The design, colors, labels and packaging ease its visibility and identification
- The fastening band is easy to break manually to achieve a quicker loading operation

RIOLINE™ 1.4S Classification	RIONEL™ LLF 1.4B Classification
Packaging RIOLINE™ cases have a single layer that contains two spools.	Packaging RIONEL™ LLF cases have a single layer that have verticle dividers based on length and unit count.
Hazardous Material Classification Articles, Explosives, N.O.S. Class and Division 1.4S PG II, UN 0349	Hazardous Material Classification Detonators, Non-Electric Class and Division 1.4B UN 0361



Case Dimensions (L*W*H)
Case Size: 20" x 10" x 11" (508mm x 254mm x 279mm)

RIOLINE™ Packaging

Feet	Meters	Spools per Case
2,500	762	2



Case Dimensions (L*W*H)
Case Size: 20" x 17.75" x 7.75" (508mm x 451mm x 197mm)

RIONEL™ LLF Packaging

Feet	Meters	Spools per Case	NEM per Case (kg)
200	61	21	0.2
500	152	12	0.3
1,000	305	6	0.3

Always and Never

ALWAYS fire the shot from a position outside the blast area (away from where flying rocks might occur), or if necessary to be in the blast area, from an adequate blast shelter that provides protection from flying material.

ALWAYS remain in a position away from the blast area until post-blast fumes, dust, or mists have subsided.

ALWAYS follow the manufacturer's recommendations when cutting and splicing lead-in trunkline shock tube.

NEVER hook-up any surface delay connector before you are ready to fire the blast.

Exclusion of Responsibility

Products described in this bulletin are sold by the company without warranty, express, implied or statutory except as to merchantability, or as expressly stated. In no event shall the company be liable for consequential damage or expenses incurred, directly or indirectly, by the use of any of the products or methods described herein. The products are intended for use by persons having technical skill, at their own discretion or risk. The properties and characteristics stated and the methods discussed are based on research and experience and are believed to be accurate, but purchasers should apply such methods for their particular purpose. The purchaser and/or user assumes all responsibility for any personal injury, property damage or other loss caused by or arising out of the use of the products described or the data contained herein. The purchaser and/or user assumes full responsibility for compliance with federal, state and local regulations governing storage, handling and use of the products so described. For further information about RIOLINE™, RIONEL™ LLF or any of Maxam North America's products and services please contact your sales representative or the plant/office listed below.

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