

EPR Insulated Medium Voltage Cable — 5kV through 35kV

Ethylene Propylene Rubber | Maximum Flexibility & Water-Tree Resistance | Harsh Environments

PRODUCT OVERVIEW

Mirabel Energy USA EPR (Ethylene Propylene Rubber) insulated medium voltage cable is engineered for installations where flexibility, water-tree resistance, and long-term performance in thermally and mechanically demanding environments are the primary selection criteria. EPR's inherent elastomeric properties make it the preferred insulation for cables subject to continuous flexing, frequent re-routing, and installations in confined or congested spaces where repeated bending stresses would cause premature degradation in stiffer XLPE constructions. EPR cable performs exceptionally in wet and damp locations, demonstrating superior resistance to water treeing — the primary failure mechanism for underground MV cables exposed to moisture over long service periods. Available from 5kV through 35kV in single and multi-conductor configurations, EPR insulated cables are widely specified for industrial plants, offshore platforms, marine applications, nuclear facilities, and wherever long cable service life in challenging conditions is non-negotiable.

90°C Normal Operation	130°C Emergency Overload	250°C Short-Circuit Fault	1,000 lbs/ft Max Sidewall Pressure
5kV – 35kV Voltage Range	Superior to XLPE Flexibility	Highly Resistant Water Tree	140°C Temp (Emerg.)

APPLICATIONS

- Industrial plants with frequent cable re-routing and flex demands
- Offshore platform and marine vessel MV power distribution
- Nuclear facility safety-class and non-safety MV cable applications
- Pumping stations, lock and dam facilities — continuous wet environments
- Mining surface and underground MV power feeder cable
- Chemical plant and refinery MV distribution in corrosive environments

KEY SPECIFICATIONS

- EPR insulation: elastomeric, superior flexibility vs. XLPE across all voltage classes
- Exceptional water-tree resistance — extended service life in wet/flooded installations
- Available 5kV through 35kV — single product line simplifies specification
- MV-90 (90°C normal) and MV-105 (105°C normal) temperature ratings
- Emergency overload rating: 140°C (EPR) vs. 130°C (XLPE)
- Copper tape shield or unshielded — per system grounding configuration
- CSPE (Hypalon®) or CPE jacket options for maximum chemical and oil resistance
- Passes IEEE 383 flame test — suitable for tray installations in industrial plants

TECHNICAL SPECIFICATIONS

Parameter	EPR MV-90	EPR MV-105
Voltage Range	5kV – 35kV	5kV – 35kV
Conductor Temp (Normal)	90°C	105°C
Conductor Temp (Emerg.)	140°C	140°C
Conductor Temp (Fault)	250°C	250°C
Water Tree Resistance	Superior	Superior
Flexibility vs XLPE	Significantly higher	Significantly higher
Jacket Options	PVC / CSPE / CPE	PVC / CSPE / CPE