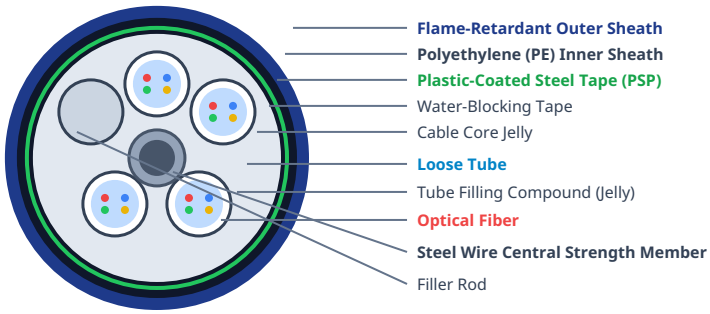
Stranded Mining Optical Fiber Cable (MGTSV)

Flame-Retardant Mining Communication Fiber Cable Technical Datasheet

Product Description

The structure of the **MGTSV optical cable** involves encasing 250 μm optical fibers into loose tubes made of high-modulus material, which are filled with a waterproof compound. The center of the cable core features a metallic central strength member (a layer of Polyethylene / PE is extruded over the central metallic strength member for certain fiber counts). The loose tubes (and filler rods) are stranded around the central strength member into a compact and circular cable core. The interstitial gaps within the cable core are filled with water-blocking compound. After a double-sided plastic-coated steel tape (PSP) is longitudinally applied, a flame-retardant outer sheath is extruded to form the final cable.

Cable Cross-Section & Structural Diagram



Product Features

Superior Mechanical & Thermal Performance

Delivers outstanding mechanical protection against tension/ crushing and maintains stable performance across wide temperature ranges.

Anti-Shrinkage Structure Design

Specially engineered compact cable structure effectively prevents loose tube retraction under environmental stresses.

Hydrolysis Resistance & High Strength

Loose tube materials feature excellent hydrolysis resistance properties and high mechanical strength for long service life.

Excellent Crush Resistance & Flexibility

Provides robust crush resistance to withstand heavy underground mining loads while retaining necessary cable flexibility.

Critical Fiber Protection Jelly

Loose tubes are filled with specialized waterproofing compound to offer essential, long-term protection for the optical fibers.

Flame-Retardant Outer Sheath

Outer sheath is crafted from specialized flame-retardant materials, ensuring superior fire safety compliance in underground mining environments.

Technical Specifications

Cable Model	Fiber Count	Cable Diameter (mm)	Allowable Tensile Force (N)		Allowable Crush Resistance (N/100mm)		Bending Radius (mm)	
			Long-Term	Short-Term	Long-Term	Short-Term	Static	Dynamic
MGTSV-4Xn	4	11.8	600	1500	300	1000	10D	20D
MGTSV-8Xn	8	11.8	600	1500	300	1000	10D	20D
MGTSV-12Xn	12	11.8	600	1500	300	1000	10D	20D
MGTSV-24Xn	24	11.8	600	1500	300	1000	10D	20D
MGTSV-36Xn	36	13.1	600	1500	300	1000	10D	20D
MGTSV-48Xn	48	13.9	600	1500	300	1000	10D	20D

Note: The above data is for reference only. Cable storage and operating temperature range: -40°C to +70°C.

Product Standards & Certifications: MGTSV optical cables comply with **YD/T 901** and **MT 386** standards, and have obtained official **Coal Mine Safety Certification (MA Certification)**.