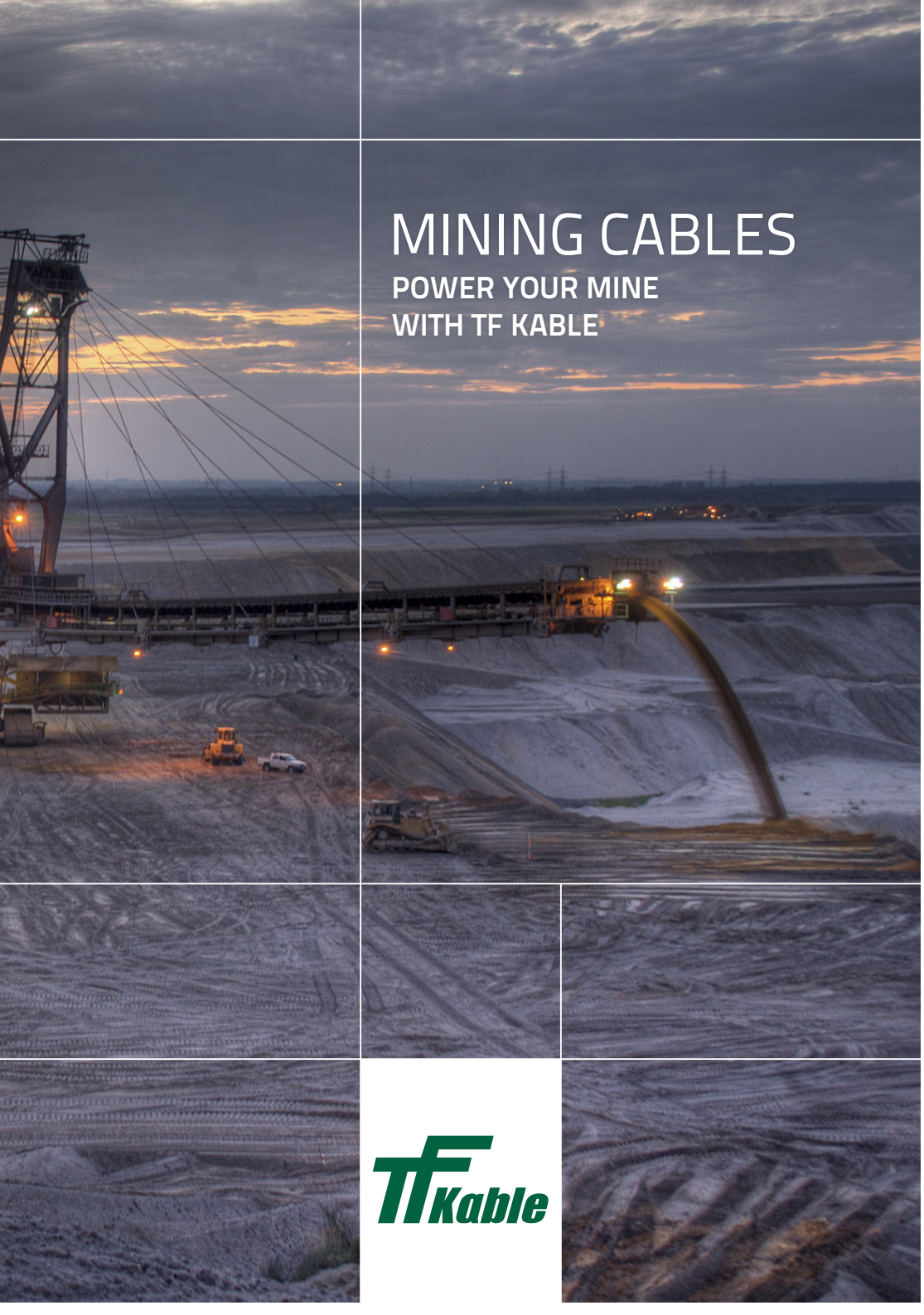


MINING CABLES

POWER YOUR MINE WITH TF KABLE

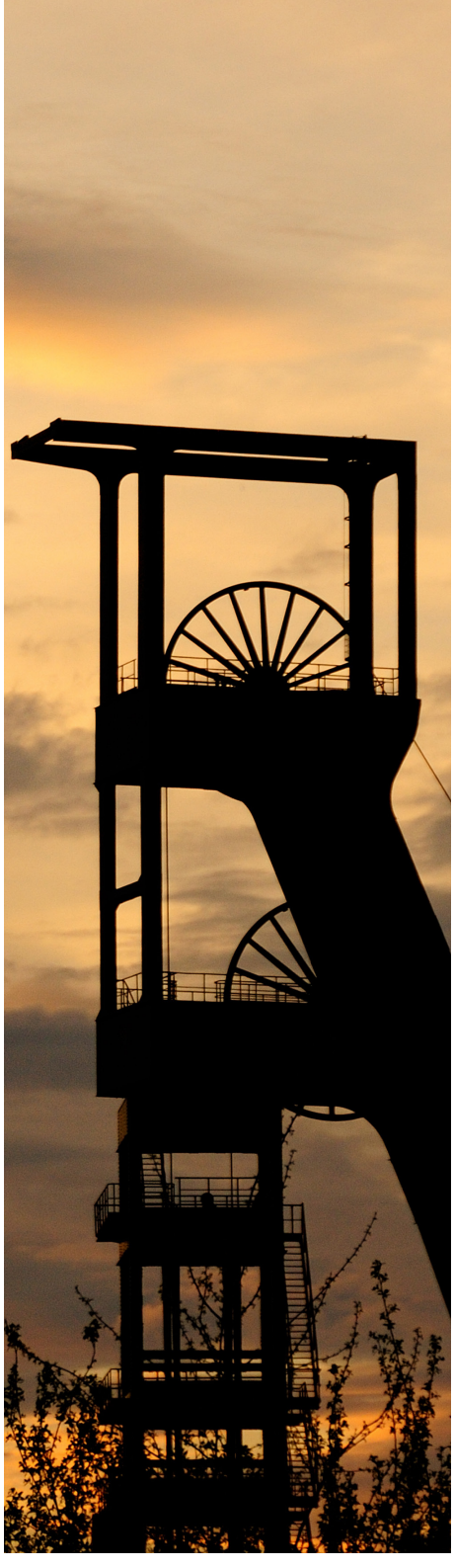
MINING CABLES

TELE-FONIKA Kable is the biggest cable producer in Central and Eastern Europe. In scope of mining cables production, TELE-FONIKA Kable is a leader in Poland and doesn't give way to other European and world's producers.

For production of mining cables, TF Kable has over a dozen various production lines of continuous vulcanization, twisters, braiders, etc. CV lines have possibility of extrude up to three layers of rubber in one operation, and instrumentation which allows to control production process, and finish goods parameters. TF Kable produces also mining cables in polyurethane sheath, which is one of the best tear resistant material. TF Kable produces cables according not only to Polish but also other national standards, such as DIN VDE (German), BS (British), ICEA i ASTM (American), NF C (French), SANS (South African), GOST (Russian) and many others including harmonized standards widely used throughout Europe and elsewhere. Many years of experience in cables production allowed for developing materials that meet various requirements. Cables working in hard conditions such as mines, have rubber sheaths which are flame retardant, rending, tear and abrasion resistant, water, oils and other chemicals resistant. Cables are designed to ensure the longest and the safest operation in heavy duty conditions in mines and other heavy industries.

All mining cables can be tailored to specific features. Optical fiber, pilot and monitoring cores are just three of the numerous additions our customers may incorporate to reach their optimum solution. In addition, our trailing cables and coal cutter cables ensure power supply despite difficult operating conditions in the mines such as excessive material strain, extraordinary climatic conditions and risk of explosion.

You can be assured of performance when mining cables, manufactured by TELE-FONIKA Kable, are installed in numerous mines all over the world.



TELE-FONIKA Kable

The Group TELE-FONIKA Kable (TF Kable) is ranked in the forefront of the global cable industry. The Group is the third manufacturer of cables and wires in Europe with significant development potential, based entirely on Polish capital.

TELE-FONIKA Kable Group's considerable investment in research and development centers and multi-skilled work teams, which have included eminent scientists working with our specialists, has been rewarded by the introduction of new-generation products and comprehensive services in the field of cable engineering. Products manufactured in our plants are sold in over 90 countries. Our product assortment includes 25 thousand cable types. The highest quality of our products is confirmed by over 460 certificates for groups of wares licensed by 34 renown centres of certifications worldwide. The company combines the good traditions of the cable industry in Poland and innovative technical solutions. TELE-FONIKA Kable Group consists of seven plants — four in Poland, one in Ukraine, and one in Serbia. We own over a dozen trade agencies abroad, reaching customers in several dozen countries around the world.

KEY FEATURES

Long term experience of manufacturing demonstrates a proven track record of manufacturing products for underground and surface mine applications. This has generated the ability to develop and produce a very extensive range of mining cables that provide the following features.

FLEXIBILITY: Excellent flexibility and torsion resistance due to superior construction and applied materials – Tinned and Rope lay conductors and pure integral filling.

WORKING SAFETY: Maximum working safety due to applying individual shielding and minimizing induction of mutual electromotive forces.

DURABILITY: Excellent abrasion, compression, tear and flame resistance due to TELE-FONIKA's Kable in-house formulated jacketing compounds: Chloroprene (Neoprene), Chlorinated Polyethylene (CPE), Chlorosulfonated Polyethylene (Hypalon) or the extra tough Polyurethane (TPU). Results of the abrasion testing according to the ISO 4649:07 has found that TELE-FONIKA's standard rubber jacketing options have a 20% higher resistance than its leading global competitors. (Result: 150-180mm3 as per ISO4649:07 testing).

MECHANICAL: High Dielectric strength, excellent resistivity, excellent resistance to flame (low flammability), good elongation capability, low flexural modulus, excellent resistance to water absorption, oils and fuels.

MINING CABLE TYPES

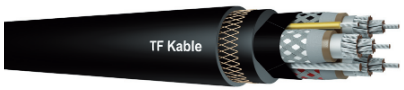
Industrial Power Cable 600V Single Conductor
H07RN-F, RHH/RHW-2 USE-2 (UL) 90C, Welding Cable 105C CSA, Stage Lighting 105C (UL)

Industrial Portable Cords and Flexible Control Cables 300V-600V / 450V-750V
H05RN-F, HO7RB-F, NSSHOU 0,6/1KV, SOOW 600V SJOOW 300V 90C and 105C (UL) CSA MSHA

Industrial Portable Power Cable 2KV (1KV) Single Conductor
DLO RHW-2 RW90 90C 2KV MSHA (UL) CSA

Industrial Portable Power Cable 2KV Multiconductor
NSSHOU, W / G / G-GC 90C 2KV (UL) C(UL) MSHA

Mining Portable Power Cable 2KV Multiconductor
NSSHOU, W / G / G-GC 90C (UL) C(UL) MSHA



Shielded Mining Portable Power Cable
NSSHOU/3E SCREENED, SHD-GC SHD-PGC 90C MSHA CSA, MP-GC 90C MSHA

Medium Voltage Power Cable
1KV - 30KV

STANDARD CONSTRUCTION

TELE-FONIKA Kable offers an extra heavy duty grade, reinforced low-layer thermo set jacket providing excellent protection and hazard resistance. For the harshest applications, TELE-FONIKA's Kable thermoplasOc Polyurethane (TPU) jacket provides the super tough physical parameters needed for the roughest mining environments and longer service life. TELE-FONIKA's Kable TPU cable jackets offer superior tensile strength, tear and abrasion resistance when comparing to standard Neoprene and CPE jackets.

CONSTRUCTION

TF Kable cable construction includes an integral fill, taped core and double layer jackets. Two pass jackets with the nylon reinforcing open braid and special compound technology applied provide durable bonding of the layers.

INSULATION

TF Kable thermosetting hard ethylene propylene insulation compound provides the properties needed for high dielectric strength, ozone resistance, water resistance and treeing. The insulation meets and often exceeds minimum requirements stipulated by UL and ICEA standards.

JACKET

TF Kable Chloroprene (Neoprene) and Chlorinated Polyethylene (CPE) based compounds provide the physical properties for performance and strength needed to resist the tear, abrasion, oil and are flame retardant. For added durability and reinforcement, TF Kable brand offers the extra tough TPU (polyurethane) jacket.

SHD-GC

THE LEADER IN MINING CABLES QUALITY AND PERFORMANCE

MINING CABLES WITH EXTRA HEAVY DUTY (EHD) JACKETS

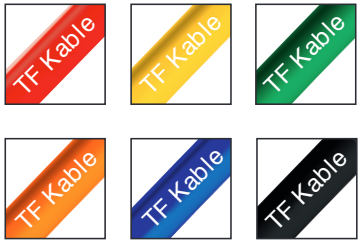
MECHANICAL CHARACTERISTICS

Attribute	ICEA Minimum for Extra Heavy Duty Jackets	Chlorinated Polyethylene (CPE)	Chloroprene (Neoprene) Colored Jackets	Chloroprene (Neoprene) Black Jackets	Chlorosulphonated Polyethylene (CSPE)	Polyuerathane (TPU) Jackets
Tensile Strength (psi)	2400	2450	2500	2700	2550	6000
Elongation (%)	300	350	500	380	350	480
Modulus at 200% (psi)	700	850	750	850	800	1600
Tear Resistance Strength (lbs/in.)	40	42	59	66	50	210

JACKET COLOR

TF Kable Chloroprene (Neoprene) or Chlorinated Polyethylene (CPE) and TPU colored jackets have the same physical properties as the black jackets with added visibility for mine applications. The jackets meet and often exceed the requirements of extra heavy or heavy duty cross linked jackets of ICEA S-75-381 WC 58-1991.

Available Colors:
Red, Yellow, Green, Orange, Blue, and Black



CABLE ASSEMBLIES

» Couplers - A range of couplers are stocked for shovel, drill and dragline applications (up to 35 kV)

» Molded Pot Heads

» Installations

TELE-FONIKA Kable in cooperation with its network of partnerships spread nationwide offers a full line of cable stock, cable couplers, pot heads, and other accessories. Combined with the ability to offer cable repairs along with first hand engineering support, TELE-FONIKA KABLE BECOMES THE TURN KEY CHOICE FOR MINING CABLES.

TELE-FONIKA Kable STRENGTHS

» Warehousing and Global Product Reach (Covering Virtually Every continent)
Short delivery time from factories / Global facilities / Stock on demand

» Flexibility and Special Arrangements for Long Term Contracts
Pricing / Quality / Value

» Widely Diversified Cable Range
25,000 different types of cable constructions with various mining cable jacket types

» Advanced Technology / R&D and Constant Cost Reduction Initiatives

» TF Kable Value Promise
HV cable systems / Mining cable terminations and accessory supply / Terminating and kitting / Stock on hand

MINING CABLE APPLICATIONS

Extra heavy duty, outer jackets have exceeded their performance in the most severe mining conditions throughout the world. Europe, North/South America, Australia, and Asia are some of the key regions that have found TF Kable to be the industry standard for the most stringent mining applications.

UNDERGROUND MINES

PRIMARY APPLICATION USAGES/CABLE RECOMMENDATIONS

Shuttle Car	TRACKLESS; NSSHOU/3E; TRM-J; TYPE 275; TYPE W FLAT 2/C 2KV; TYPE W FLAT 4/C 2KV; TYPE G FLAT 2/C 2KV; TYPE G-GC FLAT 3/C 2KV; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND 3/C 2KV; EpN 53;
Continuous Miner	NSSHOU/3E; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND3/C 2KV; SHD-GC 3/C 2KV; SHD-CGC 3/C 2KV; SHD-CGC 3/C 5KV; SHD FLAT 3/C 2KV; SHD-GC 3/C 5KV; EpN 63(S);
Longwall Miner	ONGCEKŻ; NSSHOU/3E; TYPE 441; TYPE 450; SHD-GC 3/C 2KV; SHD-PCG LONGWALL 2KV, 5KV; SHD-CGC 3/C 2KV; SHD-CGC 3/C 5KV; SHD-GC 3/C 5KV; EpN 62; EpN 63(S); NSSHCGOU;
Pumps	H07NR-F; TYPE 241; TYPE 275; TYPE W FLAT 4/C 2KV; TYPE G-GC FLAT 3/C 2KV; TYPE W ROUND 4/C 2 KV; TYPE G-GC ROUND 3/C 2KV; SHD-GC 3/C 2KV; EpN 50/58; RN-F SUB
Roof Bolter	TRACKLESS;TYPE W FLAT 4/C 2KV; TYPE G FLAT 2/C 2KV; TYPE G-GC FLAT 3/C 2KV; TYPE G-GC ROUND 3/C 2KV; SHD-GC 3/C 2KV; EpN 53/55;
Mine Power Feeder Vertical	NSSHOU; TYPE 241; MP-GC 3/C EPR/CPE 5KV-15KV; EpN 50; EpN 78/53; XHP84/2XSEYRGY
Mine Power Feeder Horizontal	NSSHOU; TYPE 209; TYPE 241; MP-GC 3/C XLPE/PVC 5KV-15KV; EpN 78; EpN 78/53; EpN 79;
Boring Machine	(N)TSCGCEWOU; TYPE 440; TYPE 441; MP-GC 3/C EPR/CPE 5KV-15KV; MP-GC 3/C XLPE/PVC 5KV-15KV; EpN 63; EpN 63(S); EpN 78;
Signal & Control Equipment	TP34 - OV; 4GTL3Gekwn-G

OPEN PIT MINES

PRIMARY APPLICATION USAGES/CABLE RECOMMENDATIONS

Dragline	R(N)TSCGEWOU; TYPE 441; TYPE 450; SHD-GC 3/C NEOPRENE 8KV; SHD-GC 3/C TPU 8KV; SHD-GC 3/C NEOPRENE 15KV; SHD-GC 3/C TPU 15KV; SHD-GC 3/C NEOPRENE 35KV; SHD-GC 3/C TPU 25KV; EpN 78; EpN 79;
Shuttle Car	TRACKLESS; NSSHOU; TYPE 275; TYPE 241; TYPE W FLAT 2/C 2KV; TYPE W FLAT 4/C 2KV; TYPE G FLAT 2/C 2KV; TYPE G-GC FLAT 3/C 2KV; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND 3/C 2KV; EpN 53;
Continous Miner	NSSHOU; TYPE 440; TYPE 441; SHD-GC 3/C NEOPRENE 2KV; SHD-GC 3/C TPU 2KV; SHD-GC 3/C NEOPRENE 5KV; SHD-GC 3/C TPU 5KV; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND 3/C 2KV; EpN 63; EpN 63(S);
Mining Equipment (Shearers, Conveyors, Crushers, Stageloaders)	ONGCEKŻ; F(N)TSCGEWOU; TYPE 409; TYPE 440; TYPE 441; SHD-GC 3/C NEOPRENE 2KV; SHD-GC 3/C TPU 2KV; SHD-GC 3/C NEOPRENE 5KV; SHD-GC 3/C TPU 5KV; EpN 60; EpN 62; EpN 63; EpN 64; EpN 79;
Blast Hole Driller	R(N)TSCGEWOU; TYPE 441; TYPE 450; SHD-GC 3/C NEOPRENE 2KV; SHD-GC 3/C TPU 2KV; SHD-GC 3/C NEOPRENE 5KV; SHD-GC 3/C TPU 5KV; SHD-GC 3/C NEOPRENE 8KV; SHD-GC 3/C TPU 8KV; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND 3/C 2KV; EpN 78; EpN 78/53;
Loading Machines	R(N)TSCGEWOU; TYPE 409; TYPE 440; TYPE 441; SHD-GC 3/C NEOPRENE 5KV; SHD-GC 3/C TPU 5KV; NSSHCGOU; SHD-GC 3/C NEOPRENE 8KV; SHD-GC 3/C TPU 8KV; SHD-GC 3/C NEOPRENE 35KV; SHD-GC 3/C TPU 15KV; EpN 78; EpN 78/53;
Pumps	H07RN8-F; TYPE 241; TYPE 275; SHD-GC 3/C NEOPRENE 2KV; SHD-GC 3/C TPU 2KV; TYPE W ROUND 4/C 2KV; TYPE G-GC ROUND 3/C 2KV; EpN 55/58; RN-F SUB
Signal & Control Equipment	TP34 - OV; 4GTL3Gekwn-G

REELING

Cable Type	Reeling Applications
R(N)TSCGEWOU, R-(N)TSCGEWOU, SHD-GC NEOPRENE, CPE, HYPALON 2KV-15KV, TYPE G-GC 3/C 2KV, TYPE W 3/C & 4/C 2KV	MOONSPIRAL, LEVEL WIND, RANDON WIND REELER ON, GANTRY CRANES, CONTAINER CRANES, LOG HANDLING CRANES, STACKER/RECLAIMERS, PORTS, SHIPYARDS, LUMBER MILLS, STEEL MILLS, MINES, EpN 78; EpN 79;

TELE-FONIKA Kable SA
Wielicka 114, 30-663 Krakow, Poland
T: (+48) 12 372 73 06, (+48) 12 372 73 19, (+48) 12 372 73 05
mining@tfkable.com
www.tfkable.com