

# SUPER-TREX®

Power, Welding & Control Cables



# The Total Wire & Cable Solution

TPC Wire & Cable Corp. is a leading supplier of wire, cable and connectors used in harsh industrial environments. TPC's products are designed and engineered to withstand harsh conditions including abrasion, chemicals, constant flexing and extreme temperatures. TPC serves a variety of markets including the steel, utility, mining, automotive, food and beverage, government, oil and gas, transportation and wood, pulp and paper markets. The company's long-lasting, dependable wire and cable products solve the most difficult application problems in the harshest environments resulting in lower overall costs and increased production time.

#### **PORTABLE CORDS**

Portable cords endure abuse on a daily basis. Whether you use them for heavy-duty tools, industrial heaters or hospital equipment, they can suffer from heat, twisting, abrasion and so much more. TPC Wire & Cable Corp.'s portable cords (Ultra-Gard™ and Triple-Gard™) typically last 6-9 times longer than commercial portable cord cables and offer you a variety of benefits.

PRODUCT NAME		RATINGS		
SA F12	Ultra-Gard™ Type TC-ER Rated Portable Cord	<ul><li>UL Listed</li><li>CSA</li><li>Type SOOW</li><li>600 V</li><li>Type TC-ER</li><li>RoHS Compliant</li></ul>	<ul> <li>Suitable for Class I, II, III, Division 1 &amp; 2*</li> <li>Max Conductor Temp 90°C</li> <li>MSHA Approved</li> <li>FT-4 Flame Rating</li> <li>Extra Hard Usage</li> <li>UV Resistant</li> </ul>	
	Triple-Gard™ Yellow Portable Cord	<ul> <li>UL Listed</li> <li>Type SOOW</li> <li>Suitable for Class I, II, III Div. 1 &amp; 2*</li> <li>CSA</li> <li>Triple Layered Construction</li> <li>Max Conductor Temp 105°C</li> </ul>	<ul> <li>FT-1 Flame Rating</li> <li>600 V</li> <li>UV Resistant</li> <li>RoHS Compliant</li> <li>Extra Hard Usage</li> </ul>	
71	Triple-Gard <sup>™</sup> Black Portable Cord	<ul> <li>UL Listed</li> <li>Type SOOW</li> <li>Suitable for Class I, II, III, Div. 1 &amp; 2*</li> <li>CSA</li> <li>RoHS Compliant</li> <li>Max Conductor Temp 105°C</li> </ul>	<ul> <li>FT-1 Flame Rating</li> <li>600 V</li> <li>MSHA Approved</li> <li>UV Resistant</li> <li>Weather Resistant</li> <li>Extra Hard Usage</li> </ul>	
	Extreme Temperature Cable	UL Recognized  CUL  ROHS Compliant  Max Conductor Temp 105°C	<ul> <li>FT-1 Flame Rating</li> <li>1,000 V</li> <li>UV Resistant</li> <li>Cold temp rating -70°C</li> </ul>	

<sup>\*</sup>When installed in accordance with NEC guidelines sections, 501.140, 502.140, 503.140.

# **POWER CABLES**

Super-Trex® portable power cables are designed with high-quality compounds to provide excellent service and long-term reliability against industrial and environmental abuse.

PRODUCT NAME		RATINGS		
O.B.	Type W Portable Power & Automation Cable	<ul> <li>UL Listed</li> <li>cUL Listed</li> <li>ICEA S-75-381</li> <li>All Weather Usage</li> <li>IEEE 1202 Flame Rating</li> <li>Max Conductor Temp 90°C</li> <li>Cold temp rating -40°C</li> </ul>	<ul> <li>Type W – 2,000 V</li> <li>FT-5 Flame Rating</li> <li>Suitable for Class I, II, III Div. 1 &amp; 2*</li> <li>UV Resistant</li> <li>MSHA Approved</li> <li>Extra Hard Usage</li> </ul>	
	Type W Portable Power & Automation Cable	UL Listed  Max Conductor Temp 90°C  Cold Temp Rating -40°C  UV Resistant  MSHA Approved	<ul> <li>Type W – 2,000 V</li> <li>Extra Hard Usage</li> <li>Suitable for Class I, II, III, Div. 1 &amp; 2*</li> <li>ICEA S-75-381</li> </ul>	
at Control of the Con	4 Conductor Aramid Reinforced Portable Power Reeling Cable	<ul> <li>UL Listed</li> <li>Type W</li> <li>FT-5 Flame Rating</li> <li>MSHA Approved</li> <li>Max Conductor Temp 90°C</li> </ul>	<ul> <li>2,000 V</li> <li>CSA</li> <li>Suitable for Class I, II, III, Div. 1 &amp; 2*</li> <li>Extra Hard Usage</li> </ul>	
	4/0 Type TC Power Cable	<ul> <li>UL Listed</li> <li>Suitable for Class I, II, Division 2*</li> <li>CSA</li> <li>Max Conductor Temp 90°C</li> </ul>	<ul> <li>Type TC – 600 V</li> <li>FT-4 Flame Rating</li> <li>UV Resistant</li> <li>RoHS Compliant</li> </ul>	
w Swall Company	Type W – RHH/RHW-2 Single Conductor Power Cable	<ul> <li>UL Listed</li> <li>RoHS Compliant</li> <li>Type RHH/RHW-2 – 600 V</li> <li>Max Conductor Temp 90°C</li> <li>-40°C Cold Bend Test</li> </ul>	<ul> <li>Type W – 2,000 V</li> <li>Extra Hard Usage</li> <li>Suitable for Class I, II, III, Div. 1 &amp; 2*</li> <li>UV Resistant</li> </ul>	
	Single Conductor Power Cable	UL Listed Type RHH/RHW-2 IEEE 1202 Flame Rating Max Conductor Temp 90°C Sunlight Resistant ROHS Compliant	<ul> <li>VW-1 Flame Rating</li> <li>2,000 V</li> <li>FT-4 Flame Rating</li> <li>For CT Use</li> <li>Meets Smoke Release Test – UL 1685</li> <li>-40°C Cold Bend Test</li> </ul>	
	Type MV-105 Cable	<ul> <li>Type MV-105, per UL Std. 1072</li> <li>Sunlight Resistant</li> <li>5kV to 15kV Voltage Range, 133% Insulation Level</li> <li>-40°C Cold Bend Test</li> </ul>	<ul> <li>Oil Resistant I/II</li> <li>Max Conductor Temp 105°C</li> <li>FT4/IEEE 1202 Flame Rating</li> <li>Direct Burial**</li> <li>For CT use, cond. size 1/0 AWG &amp; larger</li> </ul>	
	Type SH Single Conductor Power Cable	ASTM B-33     RoHS Compliant     FT-4 Flame Rating	<ul> <li>IEEE - 383 Flame Rating</li> <li>ICEA S-75-381/NEMA WC-58</li> <li>Max Conductor Temp 90°C</li> </ul>	
	Unshielded Jumper Cable	Max Conductor Temp 90°C	• 15,000 Volts	

<sup>\*</sup>When installed in accordance with NEC guidelines sections, 501.140, 502.140, 503.140.

<sup>\*\*</sup>When installed in accordance to 2014 NEC Article 300.50

## **WELDING CABLES**

Super-Trex® products are specifically designed to withstand high heat and provide excellent protection in harsh applications. These high quality welding cables are designed with our proprietary Super-Trex TSE jacket to protect the conductors from chemicals, abrasion, oils, impact, ozone, tearing, flame and heat. The insulation system resists oils, coolants, acids and chemicals. Extra-Flex™ welding cables are also available to meet the most demanding needs for flexibility and superior abrasion resistance.

PRODUCT NAME		RATINGS	
aleffi (	600 Volt Welding Cable	<ul><li>UL Listed</li><li>CSA</li><li>UV Resistant</li><li>FT-1 Flame Rating</li><li>RoHS Compliant</li></ul>	<ul> <li>600 V</li> <li>Max Conductor Temp 90°C</li> <li>Type SC</li> <li>MSHA Approved (2, 1/0, 2/0, 3/0, 4/0 Only)</li> </ul>
DC Welding Cable		CSA FT-1 Flame Rating UV Resistant	<ul><li>RoHS Compliant</li><li>Max Conductor Temp 90°C</li><li>90 Volts Max</li></ul>

#### **VFD / SERVO MOTOR CABLES**

Super-Trex® VFD Cables are built to withstand the harsh electrical environment typically generated in VFD systems. Corona protection up to 2000 volts, three power/three symmetrical ground wires, and a braid/foil shield system contribute to excellent electrical characteristics designed specifically for VFD systems. A heavy-duty jacket provides superior protection against abraision, oils, ozone, sunlight, and all-weather flexibility.

PRODUCT NAME		RATINGS	
	VFD Shielded Power Cable	<ul><li>UL Listed</li><li>cUL</li><li>FT-4 Flame Rating</li><li>600V TC-ER / 1000 V Type R90</li></ul>	<ul> <li>Type TC-ER</li> <li>Corona Resistant to 2,000 V</li> <li>Max Conductor Temp 90°C</li> </ul>

## REELING CABLES

Super-Trex® Reeling Cables are designed with high quality compounds to provide excellent service and long-term reliability. Today's demanding environments require quality cord and cable that can keep your equipment up and running. Super-Trex® products are designed for impact, vibration, abrasion, pulling, flexing, oil, chemicals, extreme heat and cold.

PRODUCT NAME		RATINGS	
	Multi-Conductor P&R Cable	<ul> <li>UL Listed</li> <li>RoHS Compliant</li> <li>Type TC – 600 V</li> <li>CSA</li> <li>UV Resistant</li> <li>MSHA Approved (16 AWG Only)</li> </ul>	<ul> <li>Type WTTC – 1,000 V</li> <li>FT-1 Flame Rating</li> <li>Max Conductor Temp 90°C Dry</li> <li>Max Conductor Temp 75°C Wet</li> <li>Suitable for Class I, II, Div. 2*</li> </ul>
Heavy-Duty High Flex Crane Cable		600 V     Extra Heavy-Duty     All Weather Usage	<ul><li>Aramid Reinfoced</li><li>Max Conductor Temp 90°C</li><li>Cold temp rating -40°C</li></ul>

\*When installed in accordance with NEC guidelines sections, 501.140, 502.140, 503.140.

# **SUPER-TREX® CHEMICAL RESISTANCE** (CHART 1)

The chart below shows typical fluid resistance properties of the Super-Trex<sup>®</sup> Jacket and Live-Flex<sup>™</sup> inner conductor insulation material used in the Super-Trex Type SOO Ultra-Gard<sup>™</sup> and Type SOO Triple-Gard<sup>™</sup> Portable Cord.

CHEMICAL	SUPER-TREX® JAKET RATING	LIVE-FLEX™ INSULATION RATING
Acetylene	А	В
Aluminum Chloride Solutions	А	A
Aluminum Sulfate Solutions	А	A (250°)
Ammonium Chloride Solutions	А	A
Ammonium Sulfate Solutions	А	A (200°F)
Amyl Alcohol	А	A (200°F)
Aniline	А	В
ASTM Oil #1	А	A
ASTM Oil #3	А	B (158°F)
ASTM Reference Fuel A	А	A
Asphalt	В	В
Barium Hydroxide Solutions	А	A (200°F)
Borax Solutions	В	A (200°F)
Boric Acid Solutions	А	A (200°F)
Butane	А	A
Calcium Bisulfite Solutions	А	A (200°F)
Calcium Chloride Solutions	А	A
Calcium Hydroxide Solutions	А	A (200°F)
Carbon Dioxide	А	A (200°F)
Castor Oil	А	A (158°F)
Citric Acid Solutions	В	A
Cottonseed Oil	А	A
Ethyl Alcohol	А	A (200°F)
Ethylene Glycol	А	A (200°F)
Ferric Chloride Solutions	А	A (200°F)
Floursilicic Acid	В	A (200°F)
Formic Acid	В	A
FREON-12	А	A (200°F)
FREON-22	А	A (200°F)
Gasoline	А	В
Glue	А	A (200°F)
	А	A (200°F)

CHEMICAL	SUPER-TREX® JAKET RATING	LIVE-FLEX™ INSULATION RATING	
n-Hexane	А	А	
Hydrocyanic Acid	В	A	
Hydrogen	A	А	
Hydrogen Peroxide, 90%	A	А	
Isopropyl Ether	А	В	
Kerosene	А	В	
Linseed Oil	A	А	
Lubricating Oils	A	B (158°F)	
Magnesium Chloride Solutions	A	A (220°F)	
Magnesium Hydroxide Solutions	A	A (220°F)	
Mercuric Chloride Solutions	A	А	
Mercury	A	А	
Methyl Alcohol	A	А	
Methulethyl Keytone	С	D	
Mineral Oil	A	A	
Oleic Acid	А	В	
Palmitic Acid	А	В	
Phosphoric Acid, 20%	А	A (200°F)	
Phosphoric Acid, 60%	А	A (200°F)	
Phosphoric Acid, 70%	А	A (200°F)	
Phosphoric Acid, 85%	А	A (200°F)	
Picric Acid, 70%	А	А	
Soap Solutions	А	A (200°F)	
Sodium Chloride Solutions	А	А	
Soybean Oil	А	А	
Stannic Chloride	А	В	
Stearic Acid	А	B (158°F)	
Sulfuric Acid, up to 5%	А	А	
Sulfuric Acid, up to 5-10%	А	А	
Toluene	D	D	
Triethanol Amine	А	A (158°F)	
Tung Oil	A	Α	

# **SUPER-TREX® CHEMICAL AND SOLVENT RESISTANCE (CHART 2)**

Super-Trex® Cord and Cable is jacketed with TSE, a specially compounded thermoset elastomer which has excellent resistance to most chemicals and solvents.

Resistance to solvents and chemicals is tested by immersing cable specimens in a solution for 28 days at room temperature.

Acetic Acid (60%)G
Ammonium Hydroxide (60%) E
ASTM Fuel AE
ASTM Fuel BG
ASTM No. 1 OilE
ASTM No. 2 Oil E
ASTM No. 3 Oil E
Beef BloodE
BeerE
Boric AcidE
Calcium Chloride E
Chlorinated Salt BrineE

Chromic Acid
Distilled WaterE
Floor PolishE
Formaldehyde (40%) E
GasolineG
GlycerineE
Hydrocarbon Hydraulic Fluid E
Hydrochloric Acid (60%)E
Hydrogen SulfideE
JP-4 (Jet Fuel)G
KeroseneE

Measurements of cable diameter are made before and after immersion. Resistance is rated as follows, depending upon the % of change in cable diameter:

(E)	Excel	lent –	less	s than	10%
(F)	Fair -	- 30%	to s	50%	

Linseed OilE
Lubricating Oil (3-in-1) E
Methyl Butyl KetoneP
MilkE
N-Butyl AlcoholE
PerchloroethyleneF
Phosphate Ester Hydraulic
Phosphate Ester Hydraulic (Skydrol 500B)P
(Skydrol 500B)P
(Skydrol 500B)

(G)	Good – 10%	to 30%
(P)	Poor - More	than 50%

Silicone Oil	E
Sodium Bicarbonate	E
Sodium Chloride	E
Sodium Cyanide (60%)	. G
Sodium Hydroxide (60%)	. G
Sodium Nitrate	E
Steel Mill Rolling Oil	E
Sulphuric Acid (10%)	E
Toluene	Р
Turpentine	. G

## **CONTROL/INSTRUMENTATION CABLES**

TPC offers a full selection of control and instrumentation cables for use in applications such as automation systems, production lines and measurement systems. Our control cables have also been used for encoder/resolvers, flow meters, pressure meters, instrumentation, programmable limit switches, programmable controllers, load cell monitors and much more.

PRODUCT NAME		RATINGS		
	Reduced Diameter Control Cable (12 AWG)	UL Listed CSA 600 V Max Conductor Temp 90°C	<ul> <li>FT-1 Flame Rating</li> <li>Type TC</li> <li>RoHS Compliant</li> <li>Suitable for Class I, II, Div. 2*</li> </ul>	
	Reduced Diameter Control Cable (16 AWG)	UL Listed CE Max Conductor Temp 90°C Type WTTC – 1,000 V	<ul> <li>FT-4 Flame Rating</li> <li>RoHS Compliant</li> <li>Type TC-ER – 600 V</li> <li>Suitable for Class I, II, Div. 2*</li> </ul>	
	Reduced Diameter Control Cable (18 AWG)	UL Listed CE Max Conductor Temp 90°C Type WTTC - 1,000 V	<ul> <li>FT-4 Flame Rating</li> <li>RoHS Compliant</li> <li>Type TC-ER – 600 V</li> <li>Suitable for Class I, II, Div. 2*</li> </ul>	
	Reduced Diameter Control Cable (20 AWG)	<ul> <li>UL Recognized in the U.S. &amp; Canada</li> <li>CSA</li> <li>600 V</li> <li>RoHS Compliant</li> </ul>	<ul><li>FT-1 Flame Rating</li><li>CE</li><li>Max Conductor Temp. 90°C</li></ul>	

 $<sup>^*</sup>When \ installed \ in \ accordance \ with \ NEC \ guidelines \ sections, \ 501.140, \ 502.140, \ 503.140.$ 



Get your cables connectorized & ready to install.