



CHEM-GARD®

Family of Cable for Extreme
Temperature & Chemicals



TPC WIRE & CABLE CORP.
EXPECT HIGH PERFORMANCE®

In today's harsh industrial environments, being mindful of the water, oils and chemicals that come into contact with your cable can give you an advantage when choosing the right product for the longest survival. With exposure, a cable's jacket can swell, crack, harden and even wick fluids into the cable itself. Installing the right product will reduce unplanned repair, replacement and downtime. TPC's Chem-Gard® brand, featuring a proprietary fluoropolymer jacket and insulation, delivers tough-yet-flexible cable designed to withstand corrosive chemicals, abrasion, high temperatures and even extreme cold. Chem-Gard® offers an extensive line of shielded and unshielded cables with both single and multi-conductor configurations.


CHEM-GARD® CHEMICAL RESISTANCE							
CHEMICAL	FLOUROPOLYMER	ETFE	FEP	CHEMICAL	FLOUROPOLYMER	ETFE	FEP
Oxidation Resistance	Excellent	Excellent	Excellent	Gasoline/ Kerosene	Excellent	Excellent	Excellent
Oil	Excellent	Excellent	Excellent	Benzol Toluene	Excellent	Excellent	Excellent
UV Rays	Excellent	Excellent	Excellent	Degreaser Solvent	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent	Alcohol	Excellent	Excellent	Excellent
Acid	Excellent	Excellent	Excellent	-	-	-	-
Alkali	Excellent	Excellent	Excellent	-	-	-	-

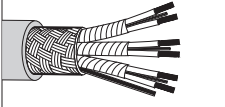

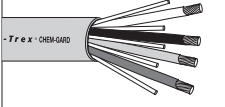
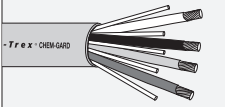

APPLICATIONS



FOOD & BEVERAGE	
APPLICATIONS	PRODUCTS
Control Room, Fill Lines, Conveyors, Automation, Connectivity	Chem-Gard® 200°C CAT 6 Industrial Ethernet Cable
Cable Trays	Chem-Gard® 200 TC Rated Cable
Freezers / Chillers	Chem-Gard® 150 Cable
Fryers / Boilers, Dryer Motors	Chem-Gard® 200 Cable
Washdown Areas	Chem-Gard® 200 & 150 Cable, Chem-Gard® Stainless Steel M12 DC Quick-Connects™, Chem-Gard® 150 with Defender® Technology
Mixers / Grinders, Bottling / Canning	Chem-Gard® 150 with Defender® Technology

STEEL APPLICATIONS		
AREA	APPLICATIONS	PRODUCTS
Caster	Load Cell, Motor Power	Chem-Gard® 200 Single & Multi-Conductor Cable
Foundry	Disa Sand, Mold Machine	Chem-Gard® 200 Multi-Conductor Cable
-	Blast Furnace	Chem-Gard® 200 (Various AWGs and colors)
-	Coke Plant – Oven Doors	Chem-Gard® 200 Single Conductor (Large AWG Sizes)
Production	Controls	Chem-Gard® 200C CAT6 Ethernet Cable

WOOD, PULP & PAPER APPLICATIONS		
AREA	APPLICATIONS	PRODUCTS
Utilities	Digester	Chem-Gard® 200 & 150 Single & Multi-Conductor Cable
Chem Plant	Lime Kiln	Chem-Gard® 200 & 150 Single & Multi-Conductor Cable
	Cable Trays	Chem-Gard® 200 TC Rated Cable
Paper Machine	Hood Lighting	Chem-Gard® 200 Single Conductor Cable
	Head Chest	Chem-Gard® 150 Multi-Conductor Cable
	Paper Break Sensor	Chem-Gard® 200 Multi-Conductor Cable
	Motor Control	Chem-Gard® 200 Resolver Cable
	Dryers	Chem-Gard® 200 Single Conductor Cable

BUS CABLES – ETHERNET			
PRODUCT NAME		RATINGS	
	Chem-Gard® 200°C CAT6 Industrial Ethernet Cable	<ul style="list-style-type: none"> • TIA/EIA 568-B-2 CAT6 • 300 V • Color Coded to 586B 	<ul style="list-style-type: none"> • Operating Temp Range -60°C to 200°C • Finely Stranded Silver-Plated Copper

CHEMICAL & TEMPERATURE RESISTANT CABLES			
PRODUCT NAME		RATINGS	
	Chem-Gard® 200 Individually Shielded Multi-Pair Control / Resolver Cable	<ul style="list-style-type: none"> • UL Recognized • 600 V • VW-1 Flame Rating • RoHS Compliant 	<ul style="list-style-type: none"> • CSA • FT-1 Flame Rating • Operating Temp Range -60°C to 200°C
	Chem-Gard® 200 TC Rated Cable	<ul style="list-style-type: none"> • UL Listed • 600 V • Extra Hard Usage 	<ul style="list-style-type: none"> • Max Conductor Temperature 200°C • Suitable for Class I, II, III, Division 2 • Shielded & Unshielded
	Chem-Gard® 200 Cable	<ul style="list-style-type: none"> • UL Recognized • 600 V • VW-1 Flame Rating • RoHS Compliant 	<ul style="list-style-type: none"> • CSA • FT-1 Flame Rating • Operating Temp Range -60°C to 200°C • Shielded & Unshielded / Single & Multi Cond.
	Chem-Gard® 150 with Defender® Technology	<ul style="list-style-type: none"> • UL Recognized • 600 V • CSA • RoHS Compliant • VW-1 Flame Rating 	<ul style="list-style-type: none"> • FT-1 Flame Rating • Operating Temp Range -60°C to 150°C • Antimicrobial • Superior Chemical Resistance
	Chem-Gard® 150 Cable	<ul style="list-style-type: none"> • UL Recognized • 600 V • VW-1 Flame Rating • RoHS Compliant 	<ul style="list-style-type: none"> • CSA • FT-1 Flame Rating • Operating Temp Range -60°C to 150°C • Shielded & Unshielded / Single & Multi Cond.

CHEM-GARD® QUICK-CONNECTS™			
PRODUCT NAME		RATINGS	
	Chem-Gard® DC Micro Quick-Connects™	<ul style="list-style-type: none"> • 300 V • IP68 Rated 	<ul style="list-style-type: none"> • RoHS Compliant • Max Conductor Temp. 90°C
	Chem-Gard® Extreme Duty Stainless Steel M12 DC Micro Quick-Connects™	<ul style="list-style-type: none"> • 250 V • IP69K Rated • 4 Amp • Abrasion Resistant 	<ul style="list-style-type: none"> • Operating Temp. Range -25°C to 85°C (Terminal) • Max Conductor Temp. 85°C • Chemical Resistant

CHEM-GARD® CONDUCTOR COLOR CODE			
1	Black	7	White/Black
2	White	8	Red/Black
3	Red	9	Green/Black
4	Green	10	Orange/Black
5	Orange	11	Blue/Black
6	Blue	12	Black/White

CHEM-GARD® COMPLIANCE

- Passes Boeing Test Method BSS 7239 for Toxic Gas, Flaming and Non-Flaming Mode.
- Passes Bombardier Specification SMP 800C Toxic Gas Generation, Flaming and Non-Flaming Mode.
- ASTM E 662 — Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials (NFPA Designation No. 258.)

CHEM-GARD® TESTIMONIAL

Robert M. Rooker,
Maintenance Manager
**Sister Schubert's
Homemade Rolls**

*"This cable [TPC's
Chem-Gard® 12/4] was
all it was represented to be and more.
My electricians loved working with
it. We replaced 10 AWG THHN with
12/4 AWG for 15 H.P. blowers in a
-30°F freezer and have better running
motors with none of the overload
problems we had before."*



CASE STUDY: TOOLS MANUFACTURER REPLACES CABLE ON FLUTE MACHINE

PROBLEM:

A manufacturer of cutting tools and hand-held power tool accessories in Derby Line, Vermont was replacing their cable every 6 months on a flute machine used to make drill bits. The cable was routinely eaten away by hot cutting oils, cut up by metal shards, and burned up from high heat generated by friction.

SOLUTION:

The TPC sales representative suggested Chem-Gard® 150 Unshielded Multi-Conductor Cable. The fluoropolymer jacket is ideal for harsh chemical environments in that it is resistant to oils, acids, solvents, and chemicals while also providing excellent defense against cutting and abrasion. The jacket is also designed for continuous temperature environments up to 150°C (302°F). Fluoropolymer conductor insulation delivers an additional layer of protection against cutting, abrasion, and chemicals.

RESULT:

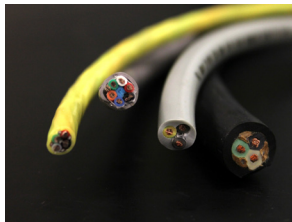
After using TPC's product for 24 months and comparing it to the commodity product for the same period of time, the customer confirmed its value. Previously, failures added up to \$3,800 in parts and labor plus the additional cost of downtime, which was 40 hours. Now, with Chem-Gard® 150 Unshielded Multi-Conductor Cable in use, the customer is replacing cable just once every 2 years, saving \$3,129 in parts and labor while increasing production by 36 hours.

LAB TEST: CHEM-GARD® VS. COMMODITY CABLE

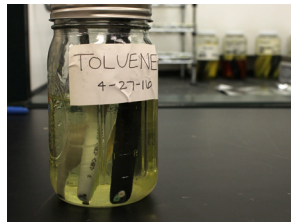
BEFORE

3 HOURS LATER

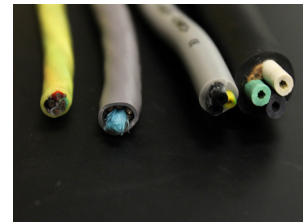
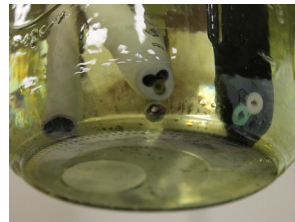
5 DAYS LATER



Four new cables ready to be exposed to Toluene, a widely used industrial solvent – one Chem-Gard® and three standard commodity cables.



Cables are partially submerged in Toluene. After only a few hours of exposure, all three of the commodity cables are already showing signs of bloating and softening.



After five days of exposure, the white and gray cables show clear signs of bloating and softening. The commodity SO Cord (black) also has heavily swollen and elongating conductor insulation. The Chem-Gard® cable remains firm and still looks new!



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