

# 75 Ohm Coaxial CATV Cable Product Overview

## Introduction

PCT International's MOCSY®7 75 Ohm coaxial CATV cable is the reliable, cost-effective solution for today's bi-directional broadband systems. Designed and manufactured entirely by PCT International, MOCSY7 cable offers service providers the lowest possible cable cost to access subscribers, while meeting or exceeding SCTE specifications to ensure reliable, long-life performance. Additionally, MOCSY7 is now specified to MoCA frequencies.

# Manufacturing

PCT's state-of-the-art manufacturing facilities are completely owned by PCT and are strategically located in the USA and Asia. PCT is organized with multiple points of redundant manufacturing assuring our customers a full complement of available capacity and on-time deliveries. Operations, such as manufacturing, R&D and QC, are in full operation on both sides of the water.

PCT is committed to supplying best of class products to the cable TV industry. Our market knowledge and manufacturing experience has enhanced the established customer base through proven quality and service.

All products fully conform with existing ANSI / SCTE standards, and we have representation on all pertinent SCTE working groups.

## **PCT Quality Assurance Program**

PCT's MoCSY7 coaxial cable has been through tested and approved by multiple MSOs and is deployed in significant amounts in the field. PCT ISO 9001:2000 certified factories offer well developed ERP systems including VMI capabilities. Customer requirements for product opportunities of all sizes and time frames benefit from our nimble responsiveness.

- State of the art QC labs on both sides of the water
- All incoming raw material is 100% lot tested
- All raw material suppliers are approved by engineering & purchasing with routine follow-up on-site vendor audits
- Numerous points of work in process QC
- Inspection done after foam extrusion, braiding and jacket extrusion
- All finished goods are 100% tested for both electrical and packaging







## **Coaxial Cable Technologies**

**Z-Wire**<sup>®</sup> - PCT's Z-Wire<sup>®</sup> drop cable with revolutionary corrosion resistant technology combines true protection for your network with ease of installation. PCT's Z-Wire utilizes a patented, water based, environmentally friendly binding process to deliver the "zero corrosion" performance that ensures the highest levels of network integrity for today's sophisticated consumers. The dry, permanent coating on Z-Wire cable prevents corrosion from weather and air pollution and ensures system reliability and performance over time. And because the coating is dry, it is easier for installers to quickly complete a clean, secure installation.

**1PreP**<sup>®</sup> - PCT coaxial cable with 1PreP<sup>®</sup> rapid preparation technology bonds the cable jacket with the outer tape. This time saving process removes both the jacket and the outer tape in a single step during the cable preparation procedure. By eliminating the need to peel away the tape separately, 1PreP saves valuable time and money while utilizing current prep tools and procedures.

**TRITON** - PCT's MOCSY7 coaxial cable with patent pending TRITON technology incorporates an enhanced layer of foil to provide superior shielding performance while maintaining the physical profile and ease of installation that characterize the entire MoCSY7 line.

One of the most significant advances in the history of coaxial cable design, MOCSY7 coaxial cable with TRITON technology has been proven to deliver optimal service quality for extended use in harsh environments. With the enhanced layer of foil, TRITON provides a 20 dB improvement in shielding after 10,000 flexes as compared to other manufacturers' cable.

**Corrosion Guard** - For customers requiring flooding, Corriosion Guard is a non-flowing gel moisture blocking treatment.

**Copper Guard** - PCT's proprietary chemical treatment is applied to the center conductor foam insulation and is adhesively bonded to center conductor



**-**\X/IRF

Regular cable after 1000 hours of salt fog testing:













## cable construction

#### a) center conductor

The center conductor is solid copper-clad steel wire for maximum signal transfer at RF frequencies and excellent strength during installation. The copper is metallurgically bonded to the steel per the requirements of ASTM B 566, Class 10 A.

#### center conductor adhesive

A proprietary, specially designed adhesive is applied as a coating to the outer surface of the center conductor to keep moisture from the interior of the cable and to sustain overall cable mechanical integrity.

## b) foam dielectric

Polyethylene (PE) is foamed to micro-cell structures to achieve the highest level of signal transfer through the cable, while maintaining structural and environmental integrity in the cable.

#### c) base shield-tape

PCT's TRITON enhanced base shield tape provides superior shielding performance both before and after flexing. A laminated aluminum-poly-aluminum tape is fully bonded to the foam dielectric to provide 100% coverage. Longitudinally applied over the core, the tape minimizes signal leakage.

#### d) second shield-braid

The second layer of shielding is braided 34 AWG aluminum wire. This important second layer improves shielding and is available in a variety of coverage options.

#### e) third shield (when specified)

The third layer is similar to the base tape layer, however it is not bonded. This construction provides the enhanced shielding required in harsh environments and for today's increasing interference from wireless networks.

### f) fourth shield-braid (when specified)

The fourth layer of shielding is braided 34 AWG aluminum wire. With it, the highest level of protection from signal ingress and egress is achieved.

#### g) jacket

High quality jacketing is used to protect the cable both from the rigors of installation and the environment. A variety of jacketing materials are available, depending upon the application. For





Reel-in-Box

common indoor/outdoor installations, polyvinyl chloride (PVC) jacketing is used and is available in black, white, and neutral colors. For direcy burial applications, a black or orange polyethylene jacket is used.

PCT's 1PreP<sup>®</sup> rapid preparation technology bonds the cable jacket with the outer tape. This time-saving process removes both the jacket and the outer tape in a single step during the cable preparation procedure.

#### flooding compounds

Flooding compounds are used between the outer shield and jacket for direct burial or conduit applications. Corrosion Guard is used for flooded Series 6 and 11 bi-shield, tri-shield, and quad-shield constructions. Corrosion Guard's non-flowing amorphous polypropylene flooding gel protects shield components from corrosion. Corrosion Guard can also be used for aerial installations.

## Product Applications and Part Numbers

### Indoor Installations

For indoor installations, PVC jacketed cable is available in black, white and neutral colors to blend well within a customer's home.

### **Outdoor Aerial Installations**

For standard outdoor aerial plant installations, two PVC jacketed cables are available: aerial and messenger. The aerial cable is designed to be pulled and lashed to a steel strand. Both are easily routed around corners and formed. This cable is also available with Z-Wire<sup>®</sup> anti-corrosive treatment or flooding compound for added environmental protection.

#### **Buried / Underground Installations**

Cables designed to be direct buried or placed in conduit are constructed with a flooding compound between the jacket and outer conductor to protect the cable from corrosion.

#### **RoHS** (definition)

Restriction of use of certain Hazardous Substances in electrical and electronic equipment.

### **Connectors and Tools**

MoCSY®7 coaxial cables are manufactured for use with industry standard connectors, tools and all other cable construction-aiding devices.







1000 ft reel

#### Braided Drop Cable Part Numbering System

				ł.					Description
Α									MOCSY®7 subscriber access cable
AZ									MOCSY®7 subscriber access cable with Z-Wire® anti-corrosion protection
AT									MOCSY®7 TRITON enhanced base shield tape
ATZ									MOCSY®7 TRITON enhanced base shield tape with Z-Wire® anti-corrosion protection
	6								Series 6 cable
	11								Series 11 cable
	59								Series 59 cable
		60							60 % braid coverage
		67							67 % braid coverage
		77							77 % braid coverage
		90							90 % braid coverage
			TS						Tri-shield - tape, braid, tape
			QS						Quad-shield - tape, braid, tape, braid
				-BF					Bonded foil, PE jacket, flooding compound
				-BV					Bonded foil, PVC jacket
				-BVR					Bonded foil, PVC jacket, riser rated
				-BVV					Bonded foil, PVC jacket, UL CATV rated
					Μ				Messenger wire - available on BV and BVV constructions
						X			Jacketing - (leave blank) black, (N) neutral, (O) orange, (W) white
							1P		1PreP® rapid preparation technology - available with Tri-Shield
								-Y	Packaging : - (leave blank) 1000 ft reel - (5) 500 ft reel - (80X) 1000 ft box - (RBX) Reel-in-box 1000 ft w/ frames - (RBX5) T-Pack 500 ft w/o frames - (R500) 500 ft MOGO refill

# **Hardened Drop Solution**

PCT's collaborative approach to product development results in advances that simplify installation and maintenance; improve the integrity of HFC and fiber infrastructures; reduce truck rolls and other associated costs; and, most importantly, increase customer satisfaction and reduce churn. By working closely with customers' field engineering personnel, PCT produces equipment and components that address real needs in a straightforward approach that enableds operators to "Harden the Drop" and improve signal getting to the customer.

PCT is dedicated to pioneering technologies that are related to Hardening the Drop<sup>™</sup>. We recognize that most trouble tickets are derived from the drop or from the consumer's home, and while the drop is the least expensive part of the network to build, it is the most expensive to maintain. PCT is the first company to engineer, manufacture and deliver a full tap-to-set top box drop portfolio. It is the cornerstone of our commitment to eliminate the drop as the network's weakest link.

Engineering resources are directed to improve this last link to the customer through innovations in such areas as connector design, passive equipment performance, and coaxial cable quality. Manufacturing takes place at three state-of-the-art facilities in the United States and Asia, ensuring that PCT maintains complete quality control of products.

### Our commitment to you

PCT is committed to continued excellence in customer service and stands behind each and every product we sell to our customers.



