Important Notice

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SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO.,LTD.
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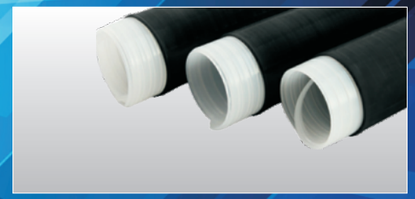
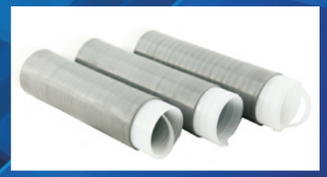
WOER HEAT-SHRINKABLE MATERIAL

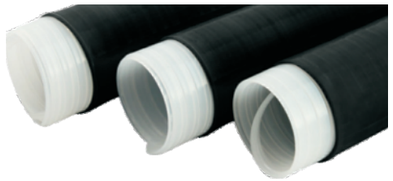
Cold Shrink Tube Specially Used in Mobile Communication Station

STOCK CODE:002130





Cold Shrink Tube Specially Used in Mobile Communication Station



Woer cold shrink tubes made of silicone rubber or EPDM rubber are a series of open ends, tubular rubber sleeves, which are manufactory expanded and assembled onto a removable supporting plastic core.
They are supplied for field installation in this pre-stretched condition. The core is removed after the tube has positioned for installation over an in line connection, terminal lug, etc., allowing the tube to shrink and form a waterproof seal.

Features

- Simple installation
- No tools or heating required
- Tightly sealing, retaining its resiliency and pressure even after years of aging and exposure
- Great thermal stability
- Excellent chemical and wet electrical properties
- Improved tough rubber formulation to withstand rough backfilling only for EPDM serial
- Waterproof which can meet requirements of IP67
- Acids and alkalis resistance
- Ozone and ultraviolet resistance
- Compact design, especially suitable for small space

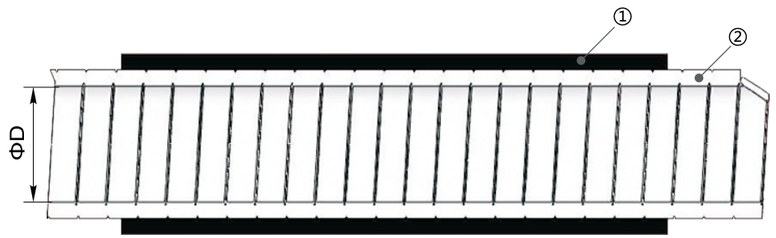
Background and Application

Antenna-feeder system is an important part of mobile communication system, properties of which are vital to the communication quality.

Exposure of antenna and feeder may moisturize the connectors, which may gather condensed water on the connectors between jumper and antenna or between feeder and jumper. All of these may rise the standing wave ratio and cause power loss, resulting in minifying the covering range of the station.

Therefore, they are ideal sealing products, mainly used to connecting points between antenna and feeder or between feeders in antenna-feeder system of mobile communication station for sealing. The excellent sealing properties can even achieve synchronous-breathing. Meanwhile, they can be used in zones of heavy pollution, lower temperature and high elevation.

General Specification



①Cold Shrink Tube

②Spiral supporting plastic core

Cold Shrink Tube of Gray Silicone Rubber					
Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)	Material	Color
625-L	Φ25	6.3～21/0.25～0.59	90～180/3.5～7	Silicone Rubber	Gray
632-L	Φ32	10～26/0.39～1.02	90～180/3.5～7	Silicone Rubber	Gray
635-L	Φ35	12～30/0.47～1.18	90～180/3.5～7	Silicone Rubber	Gray
640-L	Φ40	12.7～33/0.50～1.30	90～450/3.5～17.7	Silicone Rubber	Gray
644-L	Φ44	12.7～38/0.50～1.50	90～450/3.5～17.7	Silicone Rubber	Gray
653-L	Φ53	22～46/0.87～1.81	90～500/3.5～19.7	Silicone Rubber	Gray
665-L	Φ65	32～58/1.26～2.28	90～500/3.5～19.7	Silicone Rubber	Gray
680-L	Φ80	37～72/1.46～28.3	90～500/3.5～19.7	Silicone Rubber	Gray

Cold Shrink Tube of Black Silicone Rubber					
Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)	Material	Color
825-L	Φ25	7.3～21/0.29～0.83	81.3～203/3.2～8	Silicone Rubber	Black
835-L	Φ35	10.5～30/0.42～1.18	178～305/7～12	Silicone Rubber	Black
840-L	Φ40	11.9～34/0.47～1.34	140～305/5.5～12	Silicone Rubber	Black
845-L	Φ45	13.5～39/0.53～1.54	152～305/6～12	Silicone Rubber	Black
853-L	Φ53	18.2～45/0.72～1.77	152～457/6～18	Silicone Rubber	Black
870-L	Φ70	22.4～63/0.88～2.48	125～508/5～20	Silicone Rubber	Black

Cold Shrink Tube of General EPDM					
Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)	Material	Color
8320-6	Φ20	8～15/0.30～0.59	152/6	EPDM Rubber	Black
8325-L	Φ25	10～20/0.39～0.79	203～280/8～11	EPDM Rubber	Black
8335-L	Φ35	14～30/0.55～1.18	229～280/9～11	EPDM Rubber	Black
8340-L	Φ40	17.5～33/0.69～1.30	152～457/6～18	EPDM Rubber	Black
8353-L	Φ53	25～46/0.98～1.81	152～457/6～18	EPDM Rubber	Black
8370-L	Φ70	32～63/1.26～2.48	152～457/6～18	EPDM Rubber	Black
8104-9	Φ104	43～94/1.69～3.70	229/9	EPDM Rubber	Black
8125-9	Φ125	46～114/1.81～4.49	229/9	EPDM Rubber	Black
8150-18	Φ150	55-135/2.17～5.31	457/18	EPDM Rubber	Black

Cold Shrink Tube of High Shrinkage Ratio EPDM					
Part No.	Size	Application Range (mm/inch)	Length after Relaxed(mm/inch)	Material	Color
8435-L	Φ35	12.5～30/0.49～1.18	229～279/9～11	EPDM Rubber	Black
8440-L	Φ40	14～33/0.55～1.30	152～406/6～16	EPDM Rubber	Black
8453-L	Φ53	19～46/0.75～1.81	152～457/6～18	EPDM Rubber	Black
8460-10	Φ60	20.5～51/0.81～2.01	254/10	EPDM Rubber	Black
8470-L	Φ70	25～63/0.98～2.48	152～457/6～18	EPDM Rubber	Black
8480-13	Φ80	27.4～70/1.08～2.75	325/13	EPDM Rubber	Black

Cold Shrink Tube with Sealing Mastic

Material: silicone rubber
Color: gray
Description: Pre-applied sealing mastic with excellent sealing effect. No need of wrapping sealing mastic tape or sealing mastic to make the installation more simply and quickly.

General Specification

Part No.	Size	Application Range(mm/inch)	Length after Relaxed(mm/inch)
728-L	Φ28	9～23/0.36～0.90	100～120/3.94～4.72
732-100	Φ32	9～26/0.36～1.02	100/3.94
744-135	Φ44	12.7～38/0.5～1.49	135/5.31

Typical Physical and Electrical Properties

Item	Typical Value		Test Standard
Material	Silicone Rubber	EPDM	
Protection Performance	Ip67	Ip67	IEC60529
UV Resistance	3 or 4 grade of gray scale	4 grade of gray scale	ASTM G154
Ozone Aging	No crack	No crack	GB/T7762
Fungus Resistance	Grade 0	——	GB/T2423.16
Flammability	V-0	——	UL 94
Shore A Hardness	43	49	GB/T531
Tensile Strength	7.16 MPa	11.8 MPa	GB/T528
Elongation at Break	670%	601.2%	GB/T528
Tear Strength	35 KN/m	43 KN/m	GB/T529
Volume Resistivity	$9\times10^{15}\Omega.cm$	$7\times10^{15}\Omega.cm$	GB/T1410
Density	$1.13\ g/cm^3$	$1.10g/cm^3$	GB/T1033.1-2008
Condition	Indoor or outdoor	Indoor or outdoor	——
Air Temperature	-60~90℃	-60~90℃	——
Shelf-life	2 years	1 year	——
Service-life	30 years	20 years	——

Note: Test for IP68 is available when negotiated according to IEC60529.

Typical Physical and Electrical Properties

Test Item	Test condition and method	Standard
Waterproof Grade	Immerse the sample in water for 0.5hour with water depth of 1m. No water was found on the inner surface of the cold shrink tube.	IEC60529
UV Exposure	Test cycle : ASTM G154-06 cycle 1 Lamp type:UVA-340 Sunshine: 8hrs, （60±3）℃ BPT,0.89W/(m^2·nm) @340nm Condensation: 4hrs, （50±3）℃ BPT Exposure period:1000hrs	ASTM G154-06
Ozone Aging	Elongation: 20% Pre-process temperature（23±2）℃ Pre-process time:72hrs Testing temperature: 40℃, Ozone concentration 200×10^{-8}（V/V） Exposure period:72hrs No visual crack, break or deform was found on the sample after test.	GB/T7762-2003
Fungus Test	Fungus degree: grade 0, no influence performance of water(fungus degree: grade 0. No growth appears under a nominal magnification of 50×)	GB/T2423.16-2008 (IEC 60068-10:2008)

Ordering information:

- The min. OD shall be smaller than that of the feeder, meanwhile the max. OD shall be larger than that of the connector.
  (Please refer the specification table for mating with power cable).
- Please indicate the specification (according to the 'Length after Relaxed as shown' in specification table with the selection unit of inch) and quantity that you want to purchase.
- Please contact us if special requirement is needed.

Operating Steps:

Test Report

SGS

Test Report **Report No: GZES1109006381**
Date: October 20, 2011

Applicant & address: SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO., LTD.
WOER MANSION, LANJING NORTH ROAD, PINGSHAN INDUSTRIAL ZONE, LONGGANG DISTRICT, SHENZHEN, CHINA

Manufacture's Name & address: --

Test object / Model : Woer cold-shrinkable tube/--

Test specifications / Test standard : IEC 60529 Edition 2.1 (IP67)

Test result : The presented appliance was found to be in compliance with IP67.

Remark : Details see the following pages.

Salen Luo
Project Manager
Safety Laboratory

Peter Lei
Project Engineer

198 Kezhu Road, Scientific Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075175 www.cn.sgs.com
中国·广州·经济技术开发区科学城科珠路 198 号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075175 e sgs.china@sgs.com

SGS

TEST REPORT

No. : GZMR110920930
Date : Nov 23, 2011
Page: 1 of 6

SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO., LTD.
WOER MANSION, LANJING NORTH ROAD, PINGSHAN INDUSTRIAL ZONE, LONGGANG DISTRICT, SHENZHEN, CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name	:	WOER DOW CORNING SILICONE RUBBER
SGS Ref No.	:	GZRL2011091131
Test Performed	:	Selected test(s) as requested by applicant
Date of Receipt	:	Sep 14, 2011
Test Period	:	Sep 14, 2011 to Nov 15, 2011

Test result(s) : Please refer to the following page(s)

********To be continued********

Signed for and on behalf of
SGS-CSTC Ltd.

May Huo
Engineer

GZMR 0134166

SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Testing & Reliability Laboratory
198 Kezhu Road, Scientech Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075188 www.cn.sgs.com
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075188 e sgs.china@sgs.com

SGS

Test Report **No: GZFDO110905478FDE** **Date: 2011-10-31**

Client name : SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO., LTD.
Client address: WOER MANSION,LANJING NORTH ROAD,PINGSHAN INDUSTRIAL ZONE,LONGGANG DISTRICT,SHENZHEN,CHINA

The following sample(s) was/were submitted by/ on behalf of the client as (except SGS reference no. & SGS job no. & Date of receipt & Testing period):

Sample Name: woer Dow corning silicone rubber
Batch No.: /
Production Date: /
Manufacturer: /
SGS reference no.: SZ13370662
SGS job no.: GZFDO110905478FD
Date of receipt: Sep. 14, 2011
Testing period: Sep. 14, 2011 ~ Oct. 31, 2011

TEST(S) REQUESTED:
Selected test(s) as requested by applicant:
Antimicrobial activity test

TEST METHOD(S):
GB/T 2423.16-2008(IEC 60068-2-10:2005) Environmental testing for electric and electronic products-Part 2: Test methods-Test J and guidance: Mould growth (Method 1)

TEST ORGANISM(S):
Aspergillus niger ATCC 6275,*Aspergillus terreus* ATCC10690,*Chaetomium globosum* ATCC 6205, *hormoconis resinae* DSM 1203, ,*Paecilomyces varioti* ATCC18502,*Penicillium funiculosum* ATCC36839, *Scopulariopsis brevicaulis* ATCC36840,*Trichoderma viride* ATCC9645

TEST RESULT(S):
Please refer to next page(s).

Remark: This test report has been drafted in English and maybe translated into other languages, The English version shall prevail.

Signed for and on behalf of SGS

Authorized Signature

Page 1 of 2 RAND: **3752918**

GZFD 058003

SGS-CSTC Standards Technical Services Co., Ltd.
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198 Kezhu Road,Scientech Park Guangzhou Economic&Technology Development District,Guangzhou,China 510663 t (86-20) 82155260 f (86-20) 82075027 www.cn.sgs.com
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SGS

Test Report No. GZMR111022355 Date: Nov 16, 2011 Page 1 of 10

SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO., LTD.
WOER MANSION, LANJING NORTH ROAD, PINGSHAN INDUSTRIAL ZONE, LONGGANG DISTRICT, SHENZHEN, CHINA

The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Description	: WOER COLD-SHRINKABLE TUBE
SGS Ref No.	: GZRL2011101273
Test Performed	: Selected test(s) as requested by applicant
Sample Receiving Date	: Oct 08, 2011
Test Performing Date	: Oct 08, 2011 to Nov 01, 2011
Test Result(s)	: Please refer to the following page(s)

********To be continued********

Signed for and on behalf of
SGS-CSTC Ltd.

Lion Zhang
Technical Supervisor

GZMR 0133394

SGS-CSTC Standards Technical Services Co., Ltd.
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High Quality and Accuracy Laboratory

ilac-MRA CNAS

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L4929)

Test Center of

Shenzhen Woer Heat-Shrinkable Material Co., Ltd.

Woer Mansion, Lanjing North Road, Pingshan New District,

Shenzhen, Guangdong, China

is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence of testing.

The scope of accreditation is detailed in the attached appendices bearing the same registration number as above. The appendices form an integral part of this certificate.

Date of Issue：2014-02-08
Date of Expiry：2017-02-07
Date of Initial Accreditation：2011-02-10
Date of Update： 2014-02-08

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA) and Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

No.CNAS AL2 0008912