# TYGADURE<sup>®</sup> I LOROM CABLE & SYSTEM DESIGN





# FOREXTREMEAPPLICATIONS

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# **ABOUT US**



The LOROM name is known throughout the world for producing superior Cable and Cable Assembly Sub-Systems. Reliability, technological excellence and our ability to meet the most demanding requirements, is something that LOROM's customers have grown to expect.

We are best known for our designers, specialty manufacturing and the supplier of high quality cable and cable systems throughout the world. The challenges that our customers present to us have given us an unparalleled experience in getting it right the first time for each and every customer.

We have the know-how and experience needed to supply you with a full range of cable and cable assembly technology – from 50 AWG to 2/0 AWG with any possible thermoplastic and thermoset or fluoropolymer insulation and jacket material available today.

Our cable assembly process integrates our ability to die-cast, overmould, injection moulding and metal stamping so we can not only supply cost competitive assemblies but complete packages and systems.

Our State-of-the-Art R&D Design and Test Facilities employs more than 500 engineers that enable us to achieve results and meet standards that quite simply cannot be met by our competitors.



LOROM has the professionalism to make sure we get it right the first time ...every time

# **TYGADURE®**







LOROM`s high performance cable range is now represented by the Tygadure brand. A brand which is recognised as being at the forefront of technology, development and utilisation of high performance cable insulations over the past 50 years.

The global growth for miniature, temperature & chemical resistant cables is increasing at a rapid rate. As a key supplier to many blue-chip OEM Companies, **LOROM** have consistently demonstrated an ability to not only keep pace with this demand but to show innovative designs and increased capacity.

The investment in our high performance cable technology is evident at all of our manufacturing facilities where our processes include: conductor manufacture, fluoropolymer extrusion, PTFE ram extrusion plus conventional & expanded PTFE tape wrap, electron beam cross linking & Silicone rubber compounding.

The ability to produce high performance cables in additional to the more conventional thermoplastic & thermoset types makes our cable manufacturing portfolio complete. In addition to our cable production lines we also provide expertise in the processes of metal stamping, die-casting, over-moulding, injection moulding & material compounding. This unique ability enables **LOROM** to offer complete and competitive assemblies and systems.

# PTFE (Polytetrafluoroethylene)

# 260°C

# **Performance Characteristics**

- Outstanding chemical and temperature resistance
- Highly flexible at low temperature
- Non flammable & non toxic.
- Service temperature: -75°C ~ +200°C (Nickel Plated Conductors)
- Service temperature: -75°C ~ +200°C (Silver Plated Conductors)
- Voltage rating (V): 250 Min ~ 10000 Max

# **Typical Product Applications**

- Medical equipment
- Internal wiring
- Temperature sensors
- Oxygen sensors
- Gearbox sensors

## **Available Constructions**

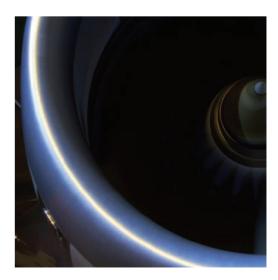
- AWG 50 ~ AWG10
- Single or multi-stranded with copper, Tin plated copper, silver plated copper, Nickel plated copper.
- Extruded & wrapped insulations available.
- Conductor: circular or flat
- Colour coded for easy circuit identification
- Single or multicore constructions
- Hook up & twisted wires.
- Screening capabilities (tape, spiral, braid)

# Available Standards

BS3G210, M22759/5/8/11, M16878, (NEMA HP-3) UL1212/3, UL1198/99,UL1164, 1180 UL1371, UL1538, UL1570 ETC....

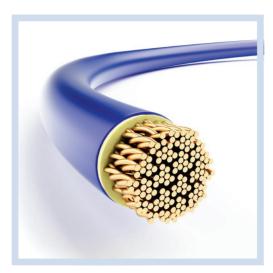














- A high voltage insulation with exceptional dielectric strength & electrical properties.
- Low flammability
- Low moisture absorption
- Excellent chemical resistance
- Service temperature: -75°C ~ +200°C
- Voltage rating (V): 250 Min ~ 10000 Max

# **Typical Product Applications**

- Medical equipment
- Automotive sensors
- Wind turbines
- High voltage power supplies & transformers
- Heating elements
- High speed data cables

## **Available Constructions**

- Conductor Range: AWG 50 ~ AWG 10
- Extruded insulation & sheathing
- Colour coded for easy circuit identification
- Hook up & twisted wires.
- Single or multicore constructions Screening capabilities (tape, spiral, braid)



# Available Standards

UL1330/31 (Heavy wall), UL1332/33 (Thin wall), UL1592, UL3239, NEMA HP-4

# Silicone Rubber

# 180°C

# **Performance Characteristics**

- Resistant to extreme environments
- Resistant to temperature fluctuation
- A high voltage insulation
- Excellent dielectric strength
- Excellent to radiation, corona & ozone
- Halogen free & flame retardant
- Service temperature: -60°C ~ +180°C

## **Typical Product Applications**

- Power cords & Power tool cordage,
- Robotics,
- Lighting
- Domestic Appliances
- Medical devices

# **Available Constructions**

- As a primary insulation and sheathing material
- Colour coded for easy circuit identification
- Hook up & twisted wires.
- Single or multicore constructions
- Screening capabilities (tape, spiral, braid)
- Conductor Range: AWG 50 ~ AWG 10

## Available Standards

VDE0250







# Tygasil Class H







# LOROM Medium Voltage Flexible Single Core With Reinforced Synthetic Braiding.

# **Performance Characteristics**

- Corona Resistant, Electrically stable.
- Halogen Free
- Excellent Oil and Chemical Resistance.
- High Abrasion Resistance.
- Excellent dielectric strength.
- Low smoke, minimal corrosive/toxic gases & fire Resistance.
- Service Temperature: -60°C ~ +180°C
  - Available Voltage Rating (V): 1.1kV, 3.7kV, 6.6kV, 15kV

# **Typical Product Applications**

- Medium Voltage Motors & Generators
- Wind Converters, transformers.
- Solar Power Inverters
- Shipbuilding & Railway Construction

# **Available Constructions**

- Conductor range: 1.50mm<sup>2</sup> ~ 120mm<sup>2</sup>
- Tinned Copper Strands
- Silicone Rubber Insulation
- Protective Synthetic Yarn Braid



# Available Standards

UL3661 (1.1kV), UL3662 (3.7kV), UL3663 (6.6kV), UL3664 (13.8kV)

# ETFE (Ethylene Tetrafluoroethylene)

# 150°C

# **Performance Characteristics**

- Excellent impact strength
- Excellent resistance to abrasion & cut through
- Chemical resistant
- Fire resistant
- High flex life
- Service temperature: -75°C ~ +150°C
- Voltage rating (V) 600 Min 5000 Max

# **Typical Product Applications**

- Aircraft & avionic equipment
- Military vehicles & equipment
- Heating elements
- Wire wrap
- Automotive applications

## **Available Constructions**

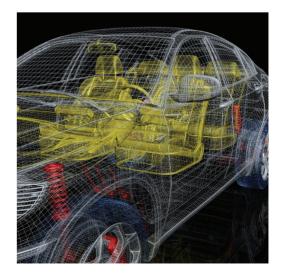
- Extruded insulation & sheathing
- Colour coded for easy circuit identification
- Hook up & twisted wires.
- Single or multicore constructions
- Screening capabilities (tape, spiral, braid)
- Conductor Range: AWG 50 ~ AWG 10

## **Available Standards**

M22759/16/17/18/19. UL1508, UL1513, UL1516, UL1517, UL1523, UL1558, UL1609, UL10086, UL10109,



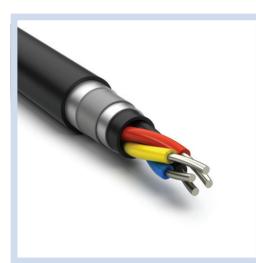












# Thin Wall Irradiated Hook Up Wires & Multicores

## **Performance Characteristics**

- Dual wall construction
- 600/1000/2500 volt rating
- Chemical resistant
- Solder iron resistant
- Lightweight
- Service temperature: -65°C ~ +150°C

## **Typical Product Applications**

- Avionics
- Trains / Trams
- Military vehicles
- Satellites
- Motorsport
- Dual wall construction

# **Available Constructions**

- A primary insulation material
- Colour coded for easy circuit identification
- Hook up & twisted wires.
- Single or multicore constructions
- Screening capabilities (tape, spiral, braid)
- Conductor Range: AWG 30 ~ AWG 8

## **Available Standards**

Mil-W-81044, M27500, Defence standard 61-12 pt 18 & 26.





# SolaMaxx

# 150°C

# LOROM electron-beam cross linked wires $\boldsymbol{\varepsilon}$ cables

## **Performance Characteristics**

- Electron beam crosslinked
- resistant to motor oils, fuel, weather & hydrolysis.
- Flame Retardant
- Compatible with common insulation varnishes & resins.
- High abrasion resistance
- Service temperature: -40°C ~ +150°C

# **Typical Product Applications**

- Motor wiring
- Sensor applications
- Mass transit
- Solar applications
- Transformers
- Electromagnets
- Household appliances

## **Available Constructions**

- As a primary insulation and sheathing material
- Colour coded for easy circuit identification
- Hook up & twisted wires.
- Single or multicore constructions
- Screening capabilities (tape, spiral, braid)
- Conductor Range: 0.5mm2 ~ 120mm2

# Available Standards

TUV, UL3266, 3288, 3289, 4486 & 4703







# High Temp Coaxial



# **200°C**



# Single/double screen - 50/75/95 $\Omega$

### **Performance Characteristics**

The outstanding electrical and mechanical properties of PTFE over a range of temperatures from -55°C  $\sim$  +200°C.

Together with excellent resistance to chemicals and oils make these coaxial cables the standard for a wide range of military and commercial applications.

# **Typical Product Applications**

- General Military Communications
- Radar Systems, Transmitters & Receivers

# **Available Constructions**

MIL-Designation	No x Dia Inch	Insulation Type	Braid Type	Sheath Type	Impedance Ohm
M17/060-RG142	Solid SPCCS .037	Extruded PTFE	Double SPCW	Extruded FEP	50
M17/ 093-00001	7/38 SPCCS .012	Extruded PTFE	Single SPCW	Extruded PFA	50
M17/094-RG179	7/38 SPCCS .012	Extruded PTFE	Single SPCW	Extruded FEP	75
M17/095-RG180	7/38 SPCCS .012	Extruded PTFE	Single SPCW	Extruded FEP	95
M17/110-RG302	Solid SPCCS .025	Extruded PTFE	Single SPCW	Extruded FEP	75
M17/111-RG303	Solid SPCCS .037	Extruded PTFE	Single SPCW	Extruded FEP	50
M17/112-RG304	Solid SPCCS .059	Extruded PTFE	Double SPCW	Extruded FEP	50
M17/113-RG316	7/0067 SPCCS	Extruded PTFE	Single SPCW	Extruded FEP	50
M17/127-RG393	7/.0312 SPCW	Extruded PTFE	Double SPCW	Extruded FEP	50
M17/128-RG400	19/32 SPCW .038	Extruded PTFE	Double SPC	Extruded FEP	50
M17/131-RG403	7/38 SPCCS .012	Extruded PTFE	Double SPC	Double Extruded FEP, Braid Inter Layer, FEP Sheath	50
M17/132-00001	7/38 SPCCS .012	Extruded PTFE	Single SPC	Extruded FEP	50
M17/136-00001	7/38 SPCCS .012	Extruded PTFE	Single SPC	Extruded PFA	75
M17/137-00001	7/38 SPCCS .012	Extruded PTFE	Single SPC	Extruded PFA	95
M17/138-00001	7/0067 SPCCS 0.020	Extruded PTFE	Single SPC	Extruded PFA	50
M17/139-00001	7/38 SPBC .012	Extruded PTFE	Single 38 SP CAD BR	Extruded PFA	95
M17/152-00001	7/0067 SPCCS 0.020	Extruded PTFE	Double SPC	Extruded FEP	50
M17/158-00001	Solid SPCCS .037	Extruded PTFE	Double SPC	Extruded FEP	50
M17/169-00001	7/38 SPCCS .012	Extruded PTFE	Single SPC	Extruded FEP	50
M17/170-00001	Solid SPCCS .037	Extruded PTFE	Single SPC	Extruded FEP	50
M17/171-00001	Solid SPCCS.059	Extruded PTFE	Double SPC	Extruded FEP	50
M17/172-00001	7/0067 SPCCS 0.020	Extruded PTFE	Single SPC	Extruded FEP	50
M17/174-00001	7/0312 SPCW .094	Extruded PTFE	Double SPC	Extruded FEP	50
M17/175-00001	19/32 SPCW .038	Extruded PTFE	Double SPC	Extruded FEP	50

# **PRODUCT AREAS**

Lambda	Cable
Sensors	Assemblies
Lithium	Bulk
Battery	Cable
Connector	Automotive
Manufacture	Harnesses
Metal	Injection
Stamping	Moulding
Headset Design & Manufacture	Rubber Parts
Powercords	HDMI
Highspeed	Antenna





## AUTOMOTIVE

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**TEST AND MEASUREMENT** 

### **E-MOBILITY**





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