

Recycled TPU Optical Cable Sheath Material



Article Overview

Recycled TPU is a flexible, durable, and chemically resistant material suitable for optical cable sheaths, offering sustainable performance comparable to virgin TPU.

Material Properties

Recycled thermoplastic polyurethane (TPU) exhibits high flexibility, tear resistance, and chemical resistance, making it ideal for cable sheaths that require durability under mechanical stress and exposure to oils or environmental factors . It maintains excellent elasticity and wear resistance, which ensures long-term performance in harsh conditions, including extreme temperatures and repeated bending . TPU's thermoplastic nature allows it to be remelted and reprocessed without significant degradation, enabling multiple recycling cycles while preserving mechanical properties .

Applications in Optical Cable Sheaths

Recycled TPU is widely used as a covering material for control, power, and optical cables due to its combination of flexibility, abrasion resistance, and chemical stability . It can be processed into films, coatings, or extruded jackets, providing a protective layer that safeguards optical fibers from mechanical damage and environmental exposure. TPU sheaths can also be modified to meet specific flame retardancy, UV resistance, or low-smoke zero-halogen (LSZH) standards, ensuring compliance with international safety regulations for telecommunications and building wiring .

Recycling and Sustainability

Article Content

Recyclable EGaln/TPU sheath-core fibres for superelastic electronics ...

Stretchable conductive fibres show great potential in the field of wearable and flexible electronics, with multifunctional

Can waste cable sheath be recycled? What's the recycling

Step-by-step breakdown of the recycling process by #pyrolysisplant How #pyrolysis turn discarded sheaths into valuable resources

Application of TPU Materials in the Cable Industry

In recent years, TPU materials have gradually been replacing PVC and chloroprene rubber in cable applications. Although the overall

TPU for Optical Fiber Cable Jacket, LSZH for Loose Tube Fiber

We provide cost-effective LSZH material, featuring with excellent flame retardant, good wear resistance & color stability, easy

Thermoplastic Polyurethane (TPU) in Optical Fiber Cable Applications

Material test data such as provided in the earlier tables can provide a guideline for use. Indeed, fiber optical cables for

Recycled TPU

Wire Industries use our TPU to provide covering materials for control and power cables due to their tear resistance and high

Environmentally Friendly Recyclable TPU Cable Sheathing Factory

The company's flagship product, S1035N, is a crosslinked semi-conductive shielding material designed for the shielding of

Applications of Thermoplastic Elastomer TPU in Cables

TPU materials can replace PVC as insulation material for wires and cables. Currently, it is used in fields requiring low temperature,

Cable Sheathing

Cable sheathing for the protection of valuable and sensitive energy and control lines has to meet the highest requirements.

TPU TPO LSZH Telecommunication Optical Fiber Jacket Solution

Relying on the strong scientific research strength, the accumulation of global application cases, the intelligent manufacturing ability

Polyethylene (PE) optical cable sheath material: performance

Material introduction Polyethylene (PE) optical cable sheath material is an outer protective material designed for optical fiber cables,

Recyclable EGaln/TPU sheath-core fibres for superelastic electronics ...

Remarkably, the valuable EGaln in the TET fibres can be recycled at a yield of 94.8% and reused. Overall, the TET fibre exhibits

Cable Sheath Materials

PVC (Polyvinyl Chloride) – as a sheath material, PVC is used extensively because of its low cost and good overall properties – high

Thermoplastic Polyurethane Applications in Communication Optical

Thermoplastic polyurethane, with good tensile strength & elasticity, great resistance to oil, grease & abrasion and high mechanical

Knowledge – TPU Cable

What is TPU cable? TPU Cable, short for Thermoplastic Polyurethane Cable, is almost the top option in the field of industry

Contact Us

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