

A Material Difference

TPE and soft PVC materials for  
**Electrical + Electronics**



 **HEXPOL<sup>®</sup>**  
**TPE**



# What We Offer

SHORE A  
—  
SHORE D

## Soft

We've 50+ years in polymer compounding and were among the 1st to produce Thermoplastic Elastomer (TPE) in Europe.

Today we offer one of the most progressive portfolios of TPE, TPO, TPV, TPU and PVC-P materials in the market. Customised to meet your specific requirements.



## Safe

We have extensive knowledge of regulatory frameworks, industry standards, as well as international and national legislation.

When developing our materials, we carefully manage each step from sourcing the raw materials, production to diagnostic, regulatory and quality assurance testing.



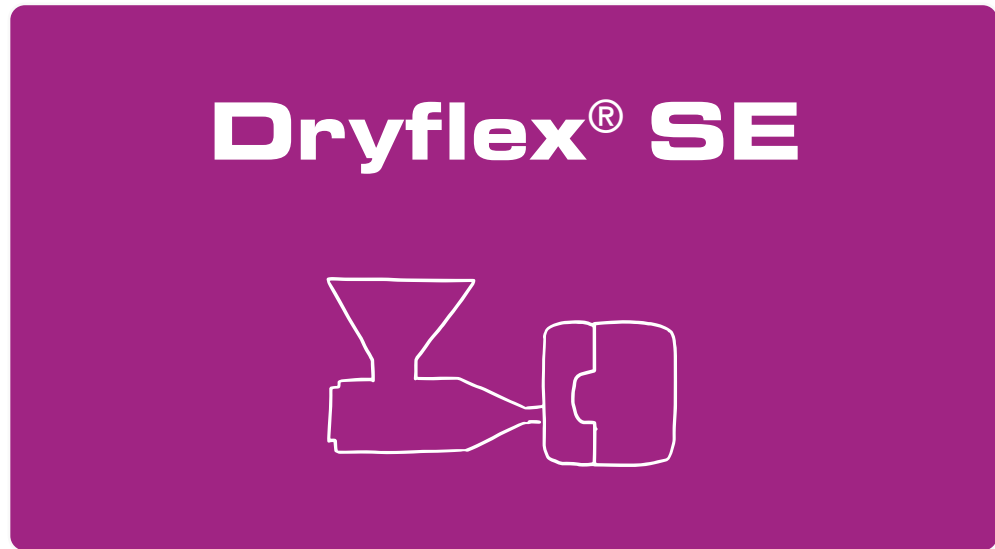
## Sustainable

Our Sustainable Development strategy covers *what we make and how we make it*.

Promoting circularity and enabling decarbonisation with recycled, bio and mass balance materials. To help you make informed choices, we can also provide Product Carbon Footprint (PCF) data.

# A Progressive Portfolio of TPE and PVC-P Materials

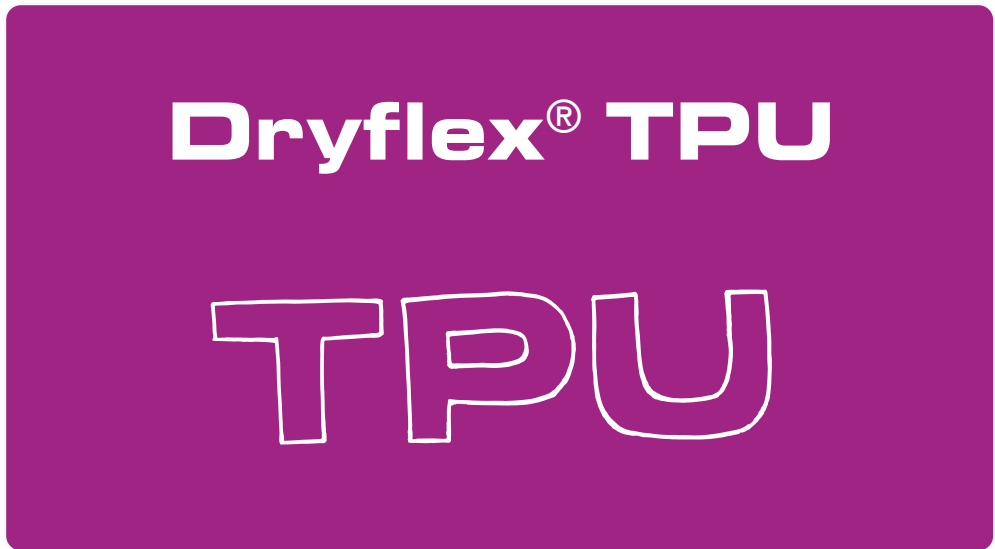
Click an image to learn more...



**TPS Compounds**  
The all rounder materials



**TPV Compounds**  
The vulcanised materials



**TPU Compounds**  
The special materials



**PVC-P Compounds**  
The traditional materials



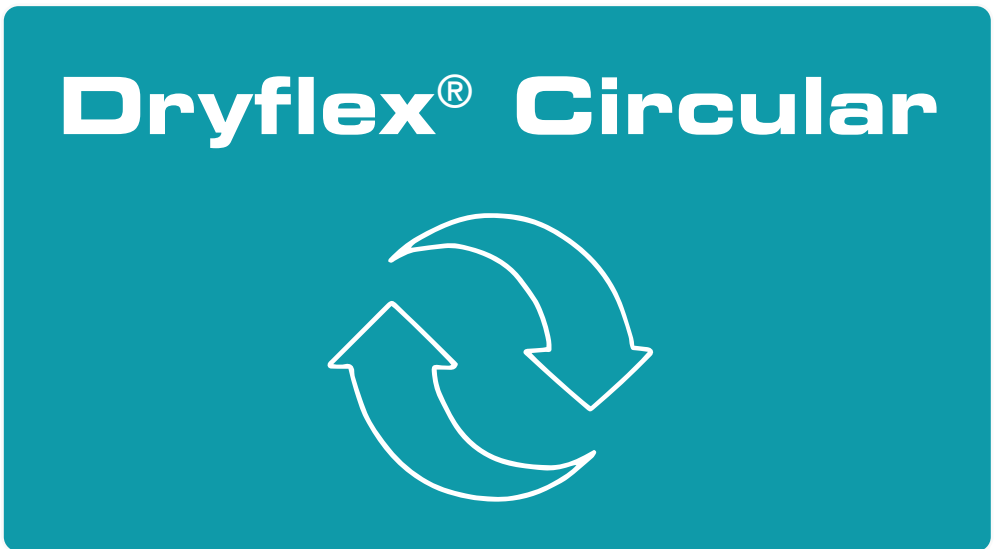
**Adhesion Modified TPE**  
To create hard/soft material combinations



**Electrically Conductive TPE**  
Antistatic, ESD, conductive...



**Flame Retardant TPE (HFFR)**  
UL94 CTI, Glow wire...



**TPE with Recycled Content**  
Promoting circularity and reducing CO2e

# Customisation Possibilities

Our R&D engineers are constantly testing new polymer combinations to create customised materials that are safer, more durable, more sustainable.

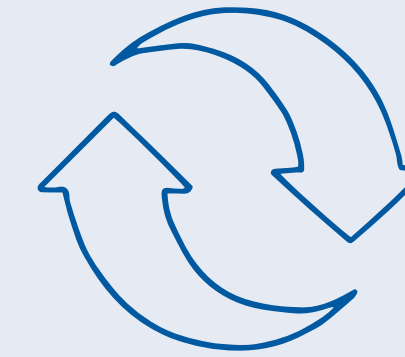
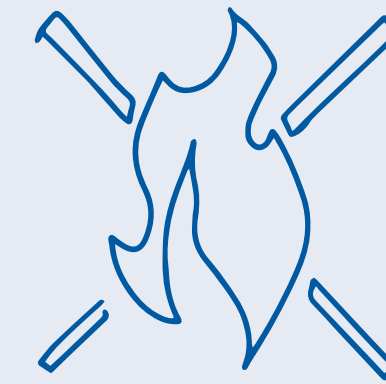
**Base Polymers** - we work with TPS, TPO, TPU, TPV and soft PVC so we can select the best solution for your application.

**Functional Performance** - such as sealing, low compression set, flexibility, electrical insulation, conductivity, chemical resistance...

**Haptics + Aesthetics** - do you need a soft touch overmoulded grip, UV resistance, vibrant colours...

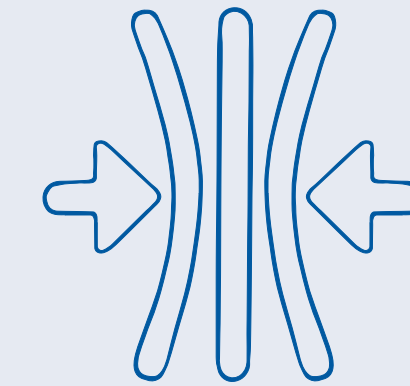
**Regulatory + Industry Requirements** - such as halogen free flame retardancy, GWIT testing to IEC 60695-2-11, REACH compliance...

**Ecodesign** - reducing product carbon footprint, increasing recyclability, durable materials with bio or recycled content...



SHORE A  
—  
SHORE D

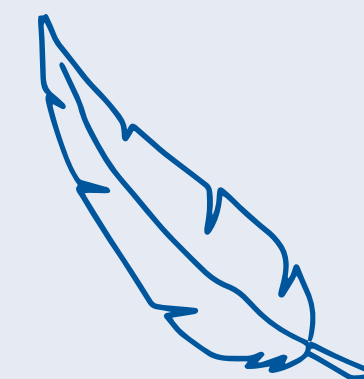
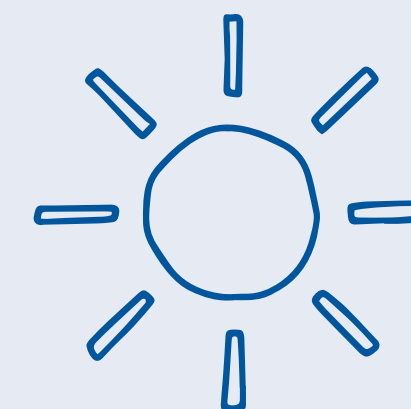
2K



soft  
PVC



TPE





# Application Areas

With an increasingly connected world, the need for safe and durable materials is expanding rapidly. The characteristics and customisation possibilities of TPEs and PVC-P materials make them suitable for a wide variety of applications in the electrical and electronics industry. You'll find examples in the following pages; they by no means list every material and every possibility, *talk to us about your application*.

## Building + Construction



Including electrical installations, wall sockets and distribution boxes.

## Cable Management



Including cable connectors, cleats, fasteners and grommets.

## Electromobility



Including plugs and infrastructure (charging stations and wall boxes).

## Industry



Including housing and device gaskets for photovoltaics and heat pumps.



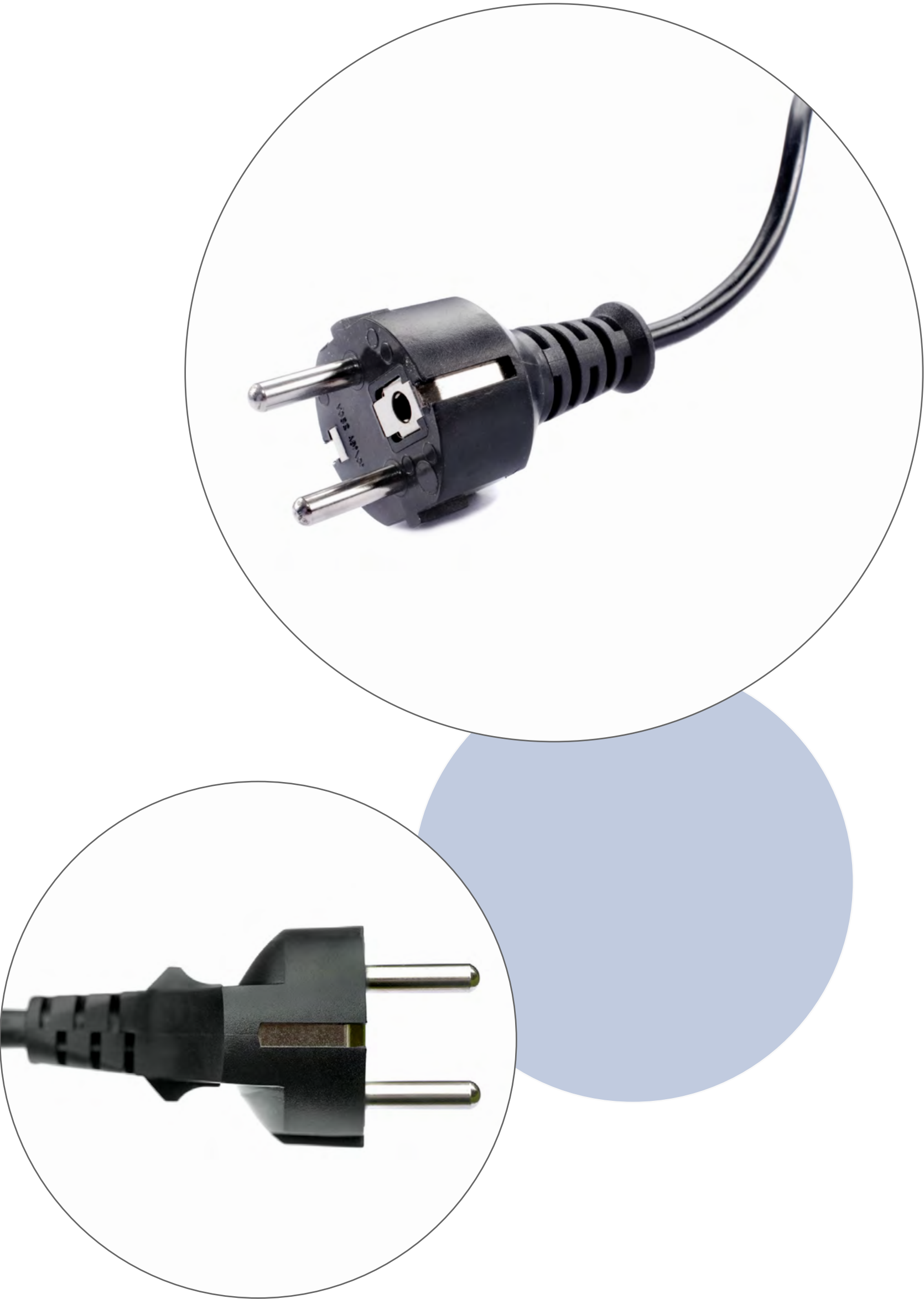
# TPEs + PVC-P for Building Applications

<b>Dryflex Flam</b> <b>UV Flam 60700</b>	<b>Dryflex SE</b> <b>50A301*</b>	<b>Dryflex 2K</b> <b>UV 55.01B254</b>	<b>Lifolit</b> <b>SG 65.0758/1</b>
HFFR TPS 60 Shore A	TPS 50 Shore A	TPS 55 Shore A	PVC-P 65 Shore A
UL94 V0 (1.5 mm) UL Listed	Adhesion to PP	Adhesion to PC-GF	Non phthalate and DEHP Free
Wall Sockets	Distribution Boxes	Grommets + Seals	Grommets + Seals



\*Version available with bio-circular attributed materials according to the Mass Balance principle

# TPEs + PVC-P for Cable Plugs

<b>Dryflex SE X 80A201</b>	<b>Dryflex Circular PIR 883192</b>	<b>Lifolit SG 80.1156/1</b>	
TPS 80 Shore A	TPS 88 Shore A	PVC-P 83 Shore A	
Bio-circular attributed materials via Mass Balance	60% Post Industrial Recyclate Content	No Phthalates	
Cable plugs	Cable plugs	Cable plugs	

# TPEs for Cable Management

## **Dryflex Flam FR 52418**

Flame Retardant TPS  
52 Shore D

Low Smoke, Zero Halogen LSZH  
LOI minimum 36%

Cable Cleats and Fasteners

## **Dryflex C UV LF 722699-2**

Conductive TPS  
70 Shore A

Volume resistance  
<  $10^3 \Omega$  (DIN EN 61340-2-3)

Cable Bushings with EMI Shielding





# TPEs for Electromobility Plugs

<b>Dryflex 2K</b> <b>UVX 75.01B045-4</b>	<b>Dryflex Flam</b> <b>UV Flam 60700-2</b>	<b>Dryflex TPU</b> <b>PU 1080 AB</b>
TPS 75 Shore A	HFFR TPS 60 Shore A	TPU-ARES 80 Shore A
Adhesion to Polyamide	UL94 V0 (1.5 mm)	Good recovery properties
Soft Touch Grip	Plug Housing Seals	Lid and Cap



# TPEs for Electromobility Infrastructure

<b>Dryflex 2K</b> <b>UV 65.01B220</b>	<b>Dryflex Flam</b> <b>UV Flam 50700-15</b>	<b>Dryflex Circular</b> <b>PIR 753318</b>
TPS 65 Shore A	HFFR TPS 50 Shore A	TPS 75 Shore A
Adhesion to PBT	UL94 V0 (1.5 mm)	30% Post Industrial Recyclate Content
Sealing in Charging Stations, Boxes + Doors	Sealing in Charging Stations, Boxes + Doors	Sealing in Charging Stations, Boxes + Doors





# TPEs for Industrial Applications

<b>Dryflex C C1 5065</b>	<b>Dryflex 2K UV 20.01B100</b>	<b>Dryflex TPV XL 80500</b>
Conductive TPS 65 Shore A	TPS 20 Shore A	TPV 80 Shore A
Volume Resistance $<10^5 \Omega$	Adhesion to ABS, ASA, PC	Low Compression Set
Device Housing + Seals	Device Housing + Seals	Device Housing + Seals

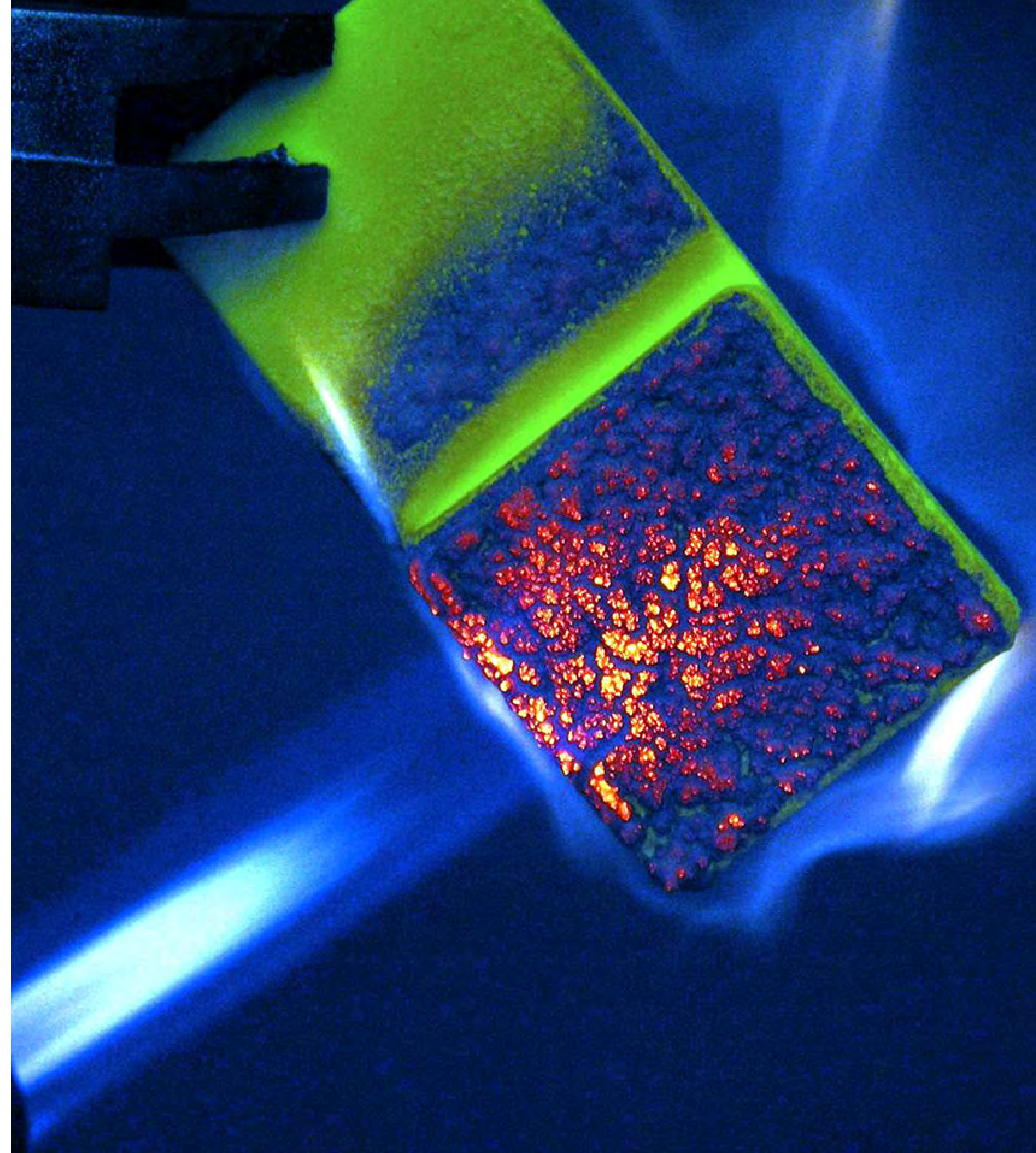




# Tested Solutions with Safety Assured

All of our materials can be customised to meet the specific requirements of the end application and the environment it will be used in. Representative grades have been tested according to relevant regulatory and industry standards.

- RoHS and REACH compliant
- Flame Retardancy testing, UL 94 V0 listed grades, yellow card
- Glow Wire Ignition Temperature (GWIT) testing
- Comparative Tracking Index (CTI) testing
- Dielectric Strength testing
- Smoke Density testing





# Halogen Free, UL Yellow Card Listed Materials

Product Family	Grade	Type	Hardness	Adhesion	UL 94 Rating	Certificate
Dryflex SE TPE	Dryflex DFG 7720N	TPS	64 Shore A	PP	HB (1.5 mm)	<a href="#">Download</a>
	Dryflex A1 600502	TPS	60 Shore A	PA	HB (1.5 mm)	<a href="#">Download</a>
Dryflex 2K TPE	Dryflex UV 63.01B045	TPS	63 Shore A	PA	HB (1.7 mm)	<a href="#">Download</a>
	Dryflex UV 85.01B022	TPS	85 Shore A	PA	HB (1.6 mm)	<a href="#">Download</a>
Dryflex TPV	Dryflex V 55 0211 T	TPV	55 Shore A	PP	HB (1.5 mm)	<a href="#">Download</a>
	Dryflex V 42D 0111-2	TPV	42 Shore D	PP	HB (1.5 mm)	<a href="#">Download</a>
Dryflex Flam TPE	Dryflex UV FLAM 60600	TPS	60 Shore A	PP	V0 (3.0 mm)	<a href="#">Download</a>
	Dryflex UV FLAM 70600-3	TPS	70 Shore A	PP	V0 (3.0 mm)	<a href="#">Download</a>
	Dryflex UV FLAM 60700	TPS	60 Shore A	PP	V0 (1.5 mm)	<a href="#">Download</a>
	Dryflex UV FLAM 60700-2	TPS	60 Shore A	PP	V0 (1.5 mm) improved processing	<a href="#">Download</a>
	Dryflex UV FLAM 600700-8	TPS	60 Shore A	PP	V0 (1.5 mm) high tear strength	<a href="#">Download</a>

# Glow Wire Ignition Temperature (GWIT) Test

The Glow Wire Ignition Temperature (GWIT) Test is used to assess the fire hazard of electrical and electronic products. It involves heating a wire to a specified temperature and bringing it into contact with a sample. The test measures the sample's ability to withstand the heat without igniting. The temperature at which ignition or self-extinguishment occurs is called the GWIT value.

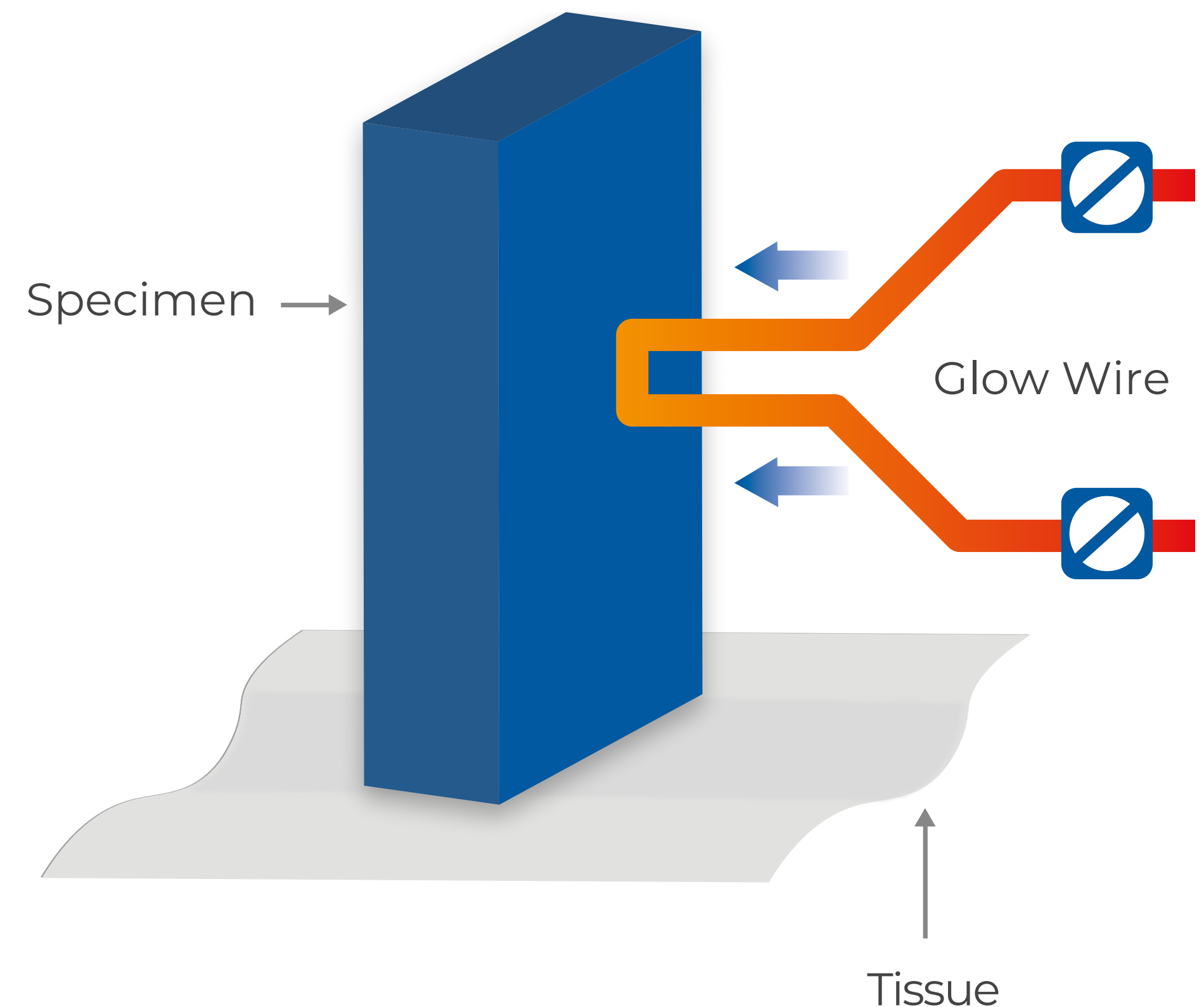
The GWIT is 25°C higher than the maximum temperature of the tip of the glow wire, which does not cause ignition of the material.

Standard: IEC 60695-2-11

## Example of material tested:

Dryflex UV FLAM 60700 TPE  
60 Shore A, UL 94 V0 (1.5 mm)

Result: 850°C (1.6 mm)





# Comparative Tracking Index (CTI) Test

The Comparative Tracking Index (CTI) test is used to measure the electrical tracking resistance of insulating materials. It evaluates their ability to resist the formation of conducting paths on the surface caused by contaminants or moisture. By applying a voltage and observing when a current flows, the CTI value is determined.

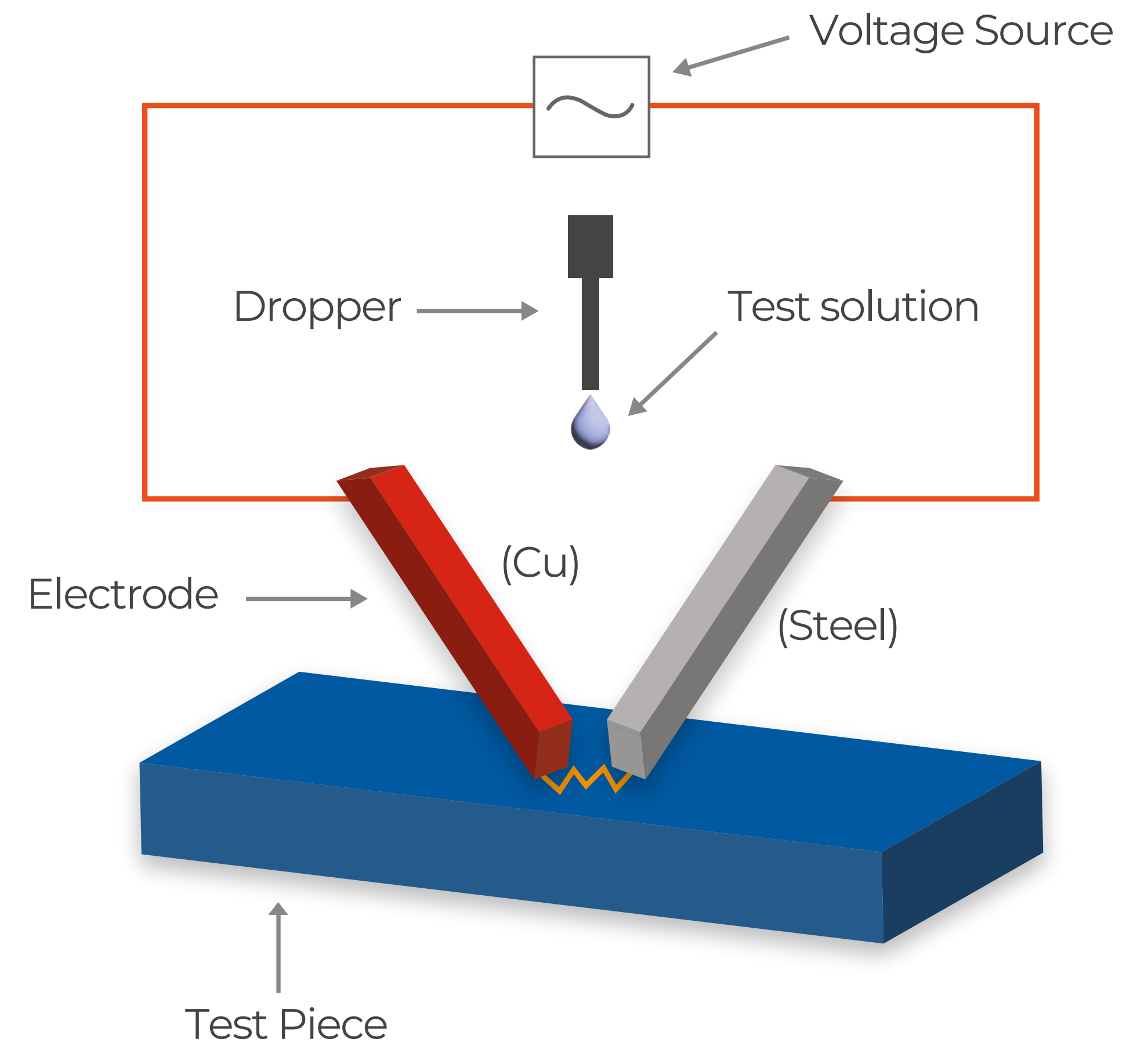
Higher CTI values indicate better tracking resistance. This test helps in selecting appropriate materials for electrical insulation, ensuring safety and reliability in high-voltage applications.

Standard: IEC 60112

## Example of material tested:

Dryflex UV FLAM 60700 TPE  
60 Shore A, UL 94 V0 (1.5 mm)

Result: 575 V. PLC rating 1



# Dielectric Strength Test

The Dielectric Strength Test, also known as the High Voltage or Breakdown Test, evaluates the ability of an insulating material or component to withstand high voltage without breaking down.

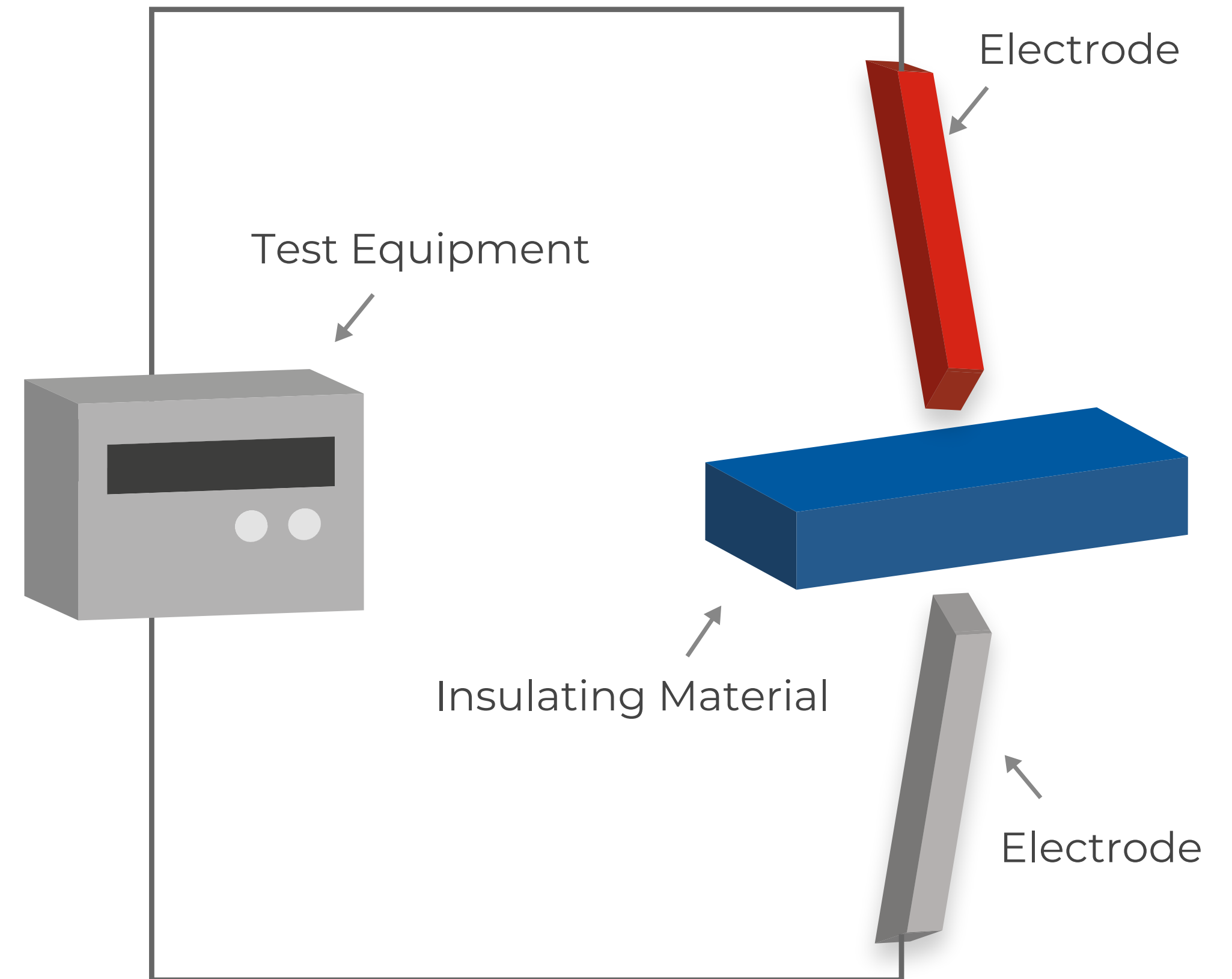
It ensures the safety and reliability of electrical systems by verifying the insulation's integrity. A high voltage is applied for a short duration, and if the insulation remains intact without arcing or sparking, it passes the test. The test is crucial for manufacturing and maintaining electrical equipment.

Standard: IEC 60243-1

## Example of material tested:

Dryflex UV FLAM 60700-2 TPE  
60 Shore, UL94 V0 (1.5 mm)

Result: 26.3 kV/mm (1.3 mm)





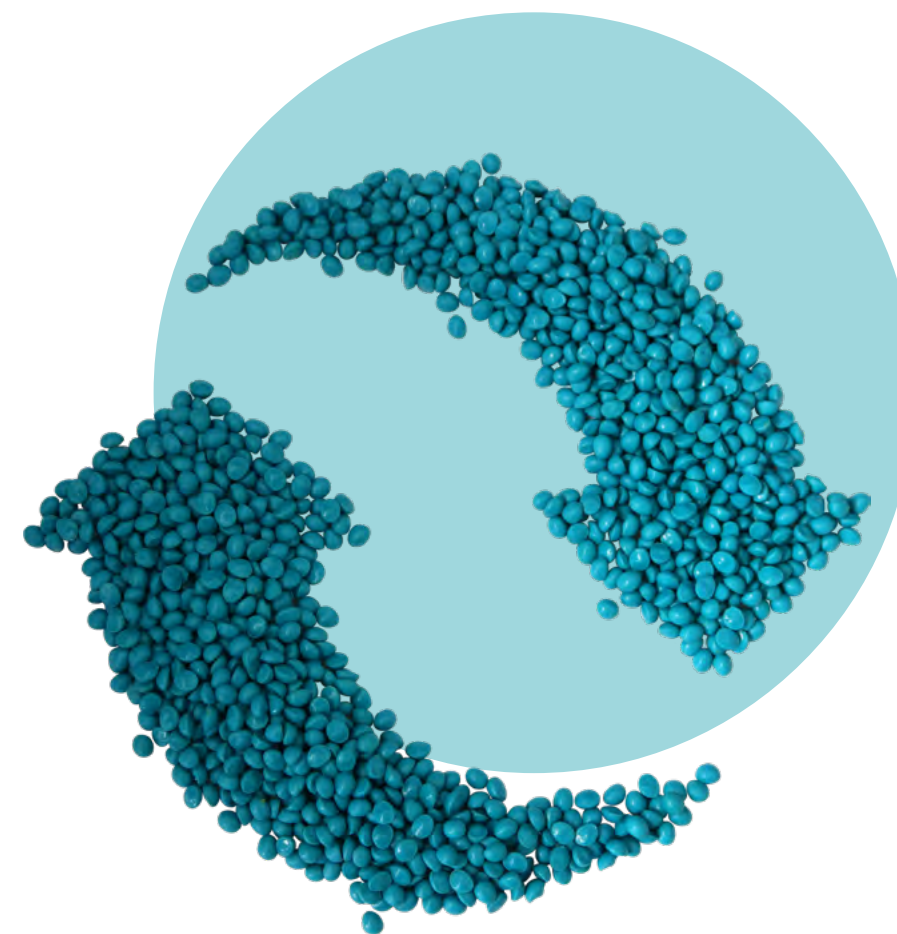
# Enabling the Shift from Virgin Fossil

Whether the question is about our sustainable development targets, ecodesign, the circular economy or GHG reductions, the discussion of how can we support and accelerate decarbonisation is one we have every day.

Our **Sustainable Materials Lab** is a support package that combines our materials and R&D capabilities, knowledge around carbon literacy and sustainability practices, and, importantly, providing evidence such as product carbon footprints. We're working with all available raw material technologies to enable the best combination based on application requirements and your sustainability targets.



Biobased content from plants ( $^{14}\text{C}$  method)



Recycled content from Post Industrial (PIR), Post Consumer (PCR) or Maritime Waste (MWR) sources.



Bio +/- or bio-circular attributed materials via mass balance (ISCC+)

# Product Carbon Footprint (PCF)

A Product Carbon Footprint (PCF) is a method for determining the climate impact of a product.

It is the sum of greenhouse gas (GHG) emissions and removals in a product system, expressed as carbon dioxide equivalents (CO<sub>2</sub>e) using the single impact category of climate change.

We can provide cradle-to-gate Product Carbon Footprints. Our PCF methodology is built upon the principles of ISO 14067:2018 for the carbon footprint of products, which is associated with the principles and requirements of ISO standards 14040:2006 and 14044:2006 for life cycle assessment.

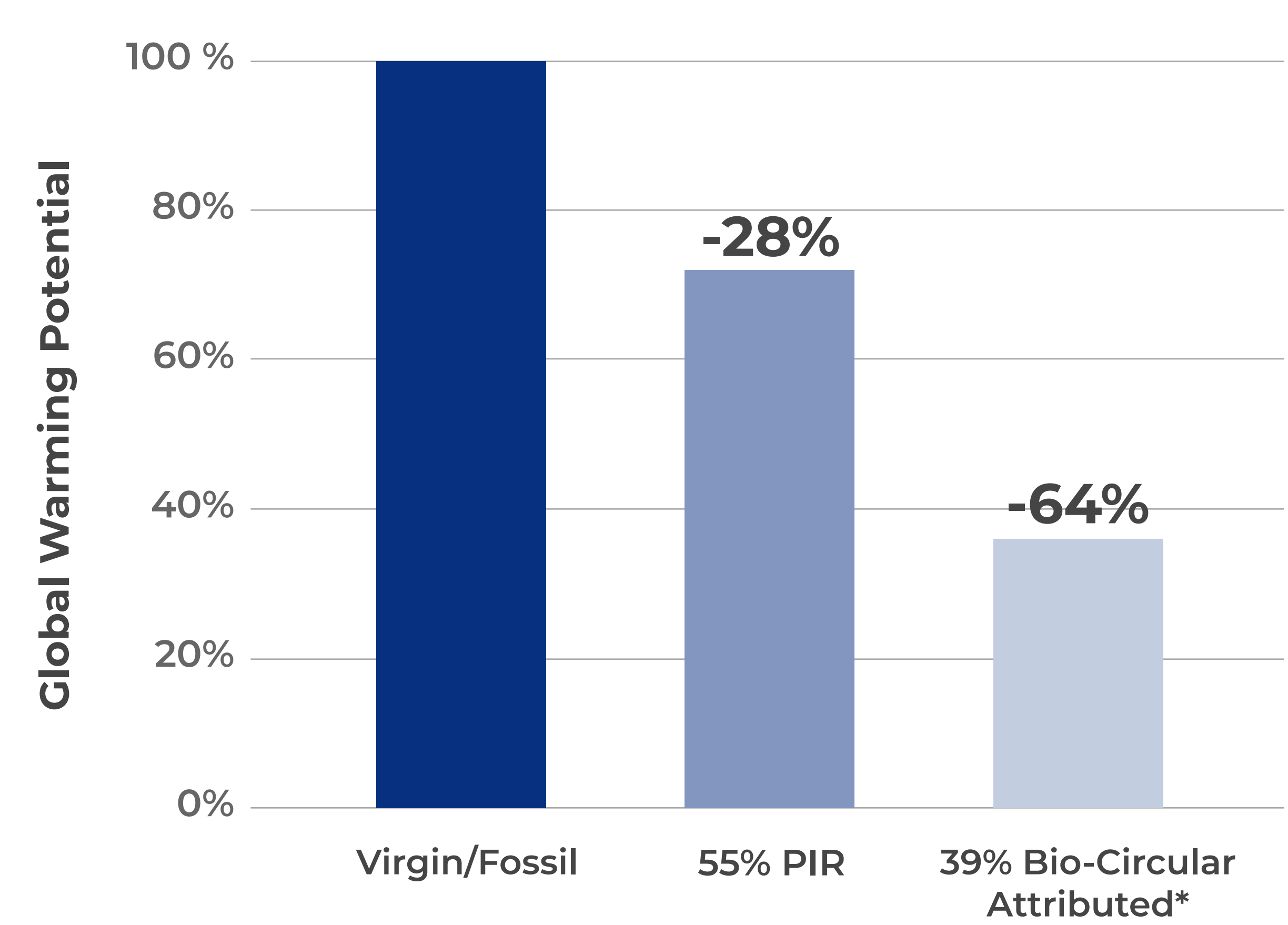
The PCF provides CO<sub>2</sub> equivalent data per kg of TPE, calculated from raw materials and their transportation, our compounding processes and packaging.





# Example PCF Comparison for Cable Plug Materials

Global Warming Potential calculated in kg CO<sub>2</sub>e/kg material



In this example, comparing a fully fossil TPE with a comparable TPE with 39% bio-circular attributed materials\* there is a **64% reduction in kg CO<sub>2</sub>e/kg TPE**

\*ISCC PLUS certified material (mass balance approach)



# A One-Stop Shop For Energy, Wire + Cable Materials

Did you know that the HEXPOL Group has one of the most comprehensive portfolios of polymeric materials for Energy, Wire and Cable applications in the market?

Including VMQ, CPE, EPDM, NBR+PVC, CR rubber, HFFR compounds, colour and additive masterbatch, as well as EVA, TPE and TPV technologies.

Learn More





# ABOUT US



[info@hexpolTPE.com](mailto:info@hexpolTPE.com) | [www.hexpolTPE.com](http://www.hexpolTPE.com)

**80,000+**  
**T/P.A. CAPACITY**

Across our Sweden, UK, German, China & North America operations. [Our companies](#)

**50+**  
**YEARS HISTORY**

We've a proud history in flexible polymer compounding & were among the 1st to produce TPEs in Europe. [About us](#)

**34,795+**  
**FORMULATIONS**

A comprehensive portfolio in TPE, TPS, TPO, TPU, TPV, soft PVC & Biobased technologies. Learn more about [Our products](#)

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