A Material Difference

TPE for Automotive Interiors

HEXPOL® TPE

What’s Your Biggest Challenge?

Are you looking to reduce weight or improve sustainability? Do you want a tactile, scratch-resistant surface? Are you facing tougher demands from consumers and legislators?

With 50+ years of experience in flexible polymer compounding, we deliver a material difference. More than just a polymer supplier, we want to be the easiest company for you to do business with.

We invest in our operations, teams and technologies to offer the most reliable, relevant and cost-effective TPE materials. Backed by highly responsive support, technical know-how and application expertise.

We’re building a trusted reputation working with companies across the globe to provide custom-formulated, high-quality materials.

Our portfolio is designed to meet the highest standards, both for today and tomorrow. It’s helping to create an enhanced aesthetic, functional and sustainable automotive interior experience.

We’re supporting OEMs and their suppliers to meet the challenges of this ever-evolving market.

Challenge us.

LOW EMISSIONS + ODOUR

SUSTAINABILITY + LIGHTWEIGHTING

DESIGN + CUSTOMISATION

NOISE REDUCTION

OPTIMISED PROCESSING

Low VOC Emissions + Odour

To help meet stricter requirements for ***Vehicle Interior Air Quality (VIAQ)*** and legislation regarding odour, fogging and VOC, we have developed **Dryflex Interior**, a range of TPEs optimised for low emissions.

They offer a **75%** reduction in emissions on average compared to other TPEs for interior applications in the market. Representative grades have been tested externally at accredited test laboratories.

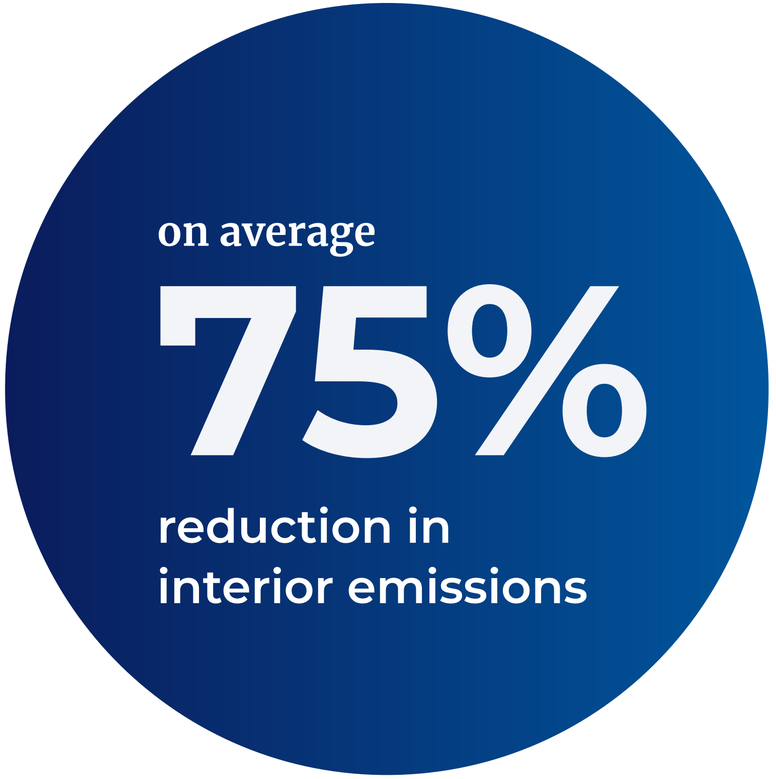
The materials display low odour with results of **2.0** to **3.0** in standards such as **VDA 270**. According to gravimetric fogging standard **ISO 6452,** they achieve **condensate < 1.0 mg** and **VOC** from **60** to **120 µg/g** and **Fog** from **200** to **600 µg/g VDA 278**.

The materials have also passed interior tests for **lightfastness**, **flammability** and **mechanical performance**.

Dryflex Interior TPEs can be used in applications such as **inlay mats** in the dashboard, door, middle console or glove box. They are also well suited for **2K applications** such as **thumb wheels, anti-squeak sealings, cup holder liners, interior trim** and **HVAC** components.

They surpass existing requirements and future-proof for emerging global emissions standards.

Download Dryflex Interior Product Guide



Emissions Testing

	Market Minimum Expectation	Previous Generation TPE	Dryflex Interior TPE
Gravimetric Fogging ISO 6452 / DIN 75201-B	≤ 2.0 mg	1.0 - 2.0 mg	0.3 - 0.7 mg
Thermodesorption (VOC) VDA 278	≤ 500 µg/g	100 - 400 µg/g	60 - 120 µg/g
Thermodesorption (FOG) VDA 278	≤ 1500 µg/g	2000 - 3000 µg/g	200 - 600 µg/g
Odour VDA 270, B3	≤ 3.0	3.5 - 4.0	2.0 - 3.0

Full emissions testing results for Dryflex Interior TPEs >

The Lightweight Challenge

Using one of the lower density grades from our **Dryflex AM** range for a set of floor mats could save **1.5kg** in weight compared to mats produced from a rubber compound.

If you multiply this for all the parts that could be produced from TPE and then factor in the average lifespan of the vehicle, you'll see how the numbers start to add up.

Processing efficiencies can be achieved with **high-flowing grades** designed for complex mouldings with a large surface area. No pre-drying or vulcanisation also **reduces energy consumption and manufacturing steps**.

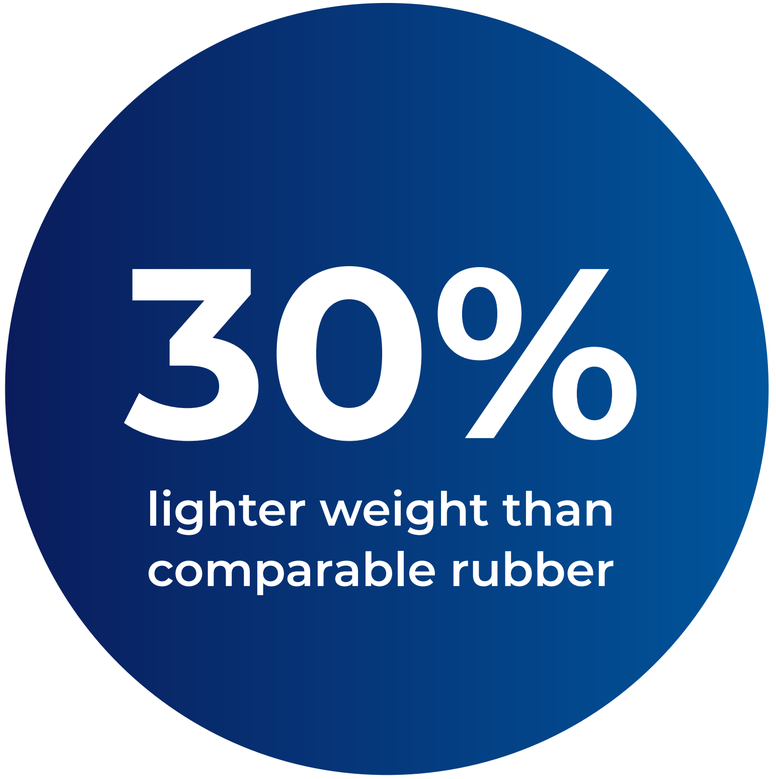
Foaming of TPE by foam injection moulding brings further weight reduction and a **noticeable better touch experience**.

Multi-component designs mean soft and rigid material combinations that allow for lower weight parts that combine the required stiffness with soft-touch haptics.

The **Dryflex 2K** range of TPEs for overmoulding and co-extrusion applications offer adhesion to various substrates such as PP, PC/ABS, PA and diverse technical thermoplastics.

Learn more about Dryflex AM TPEs >

Learn more about Dryflex 2K TPEs >



Sustainability

With increasing awareness about how we design, use and dispose of plastic products, we're supporting customers with **resource-saving materials**. These include **Dryflex Green**, TPE with biobased content from renewable sources and **Dryflex Circular**, TPE with recycled content.

We are **constantly developing our product portfolio** with ongoing research into raw material sources and polymer combinations.

So far, our testing shows it's possible to include around 35% of recycled or biobased content while fulfilling common standards for automotive interior applications.

Dryflex Green TPEs with low odour and emissions are available, a **75 Shore A** compound with a renewable content of 20% showed **VOC (42,8 µg/g)** and **Fog (474 µg/g)** in the thermodesorption test according to VDA 278. Odour (grade 3.0 in VDA 270, C3).

An example of a **Dryflex Circular TPE** for automotive interiors, a **65 Shore A** compound for inlay mats with a recyclate content of >20%, showed a very low amount of **VOC (60 µg/g)** and **FOG (594 µg/g)**. Additionally, the TPE has almost no odour (grade 2.0 according to VDA 270, B3).

Learn more about Dryflex Green TPEs >

Learn more about Dryflex Circular TPEs >

BIOBASED

or

RECYCLED CONTENT

High Flow Materials + Surface Performance

Large surfaces in automotive interiors have high requirements such as abrasion resistance, heat stability, processing ... but innovative TPEs meet these standards.

Dryflex HiF TPEs offer a more sustainable alternative to TPU foils and PVC slush, even for the most demanding applications like automotive dashboards.

They've been tested according to stringent automotive requirements. For example, heat ageing for **1000 hours at 120°C**.

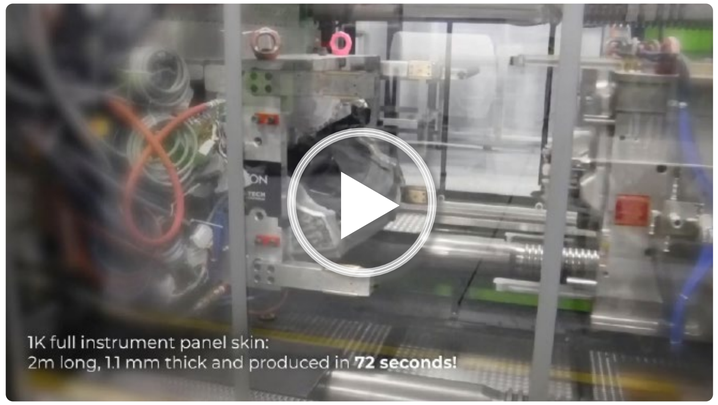
Dryflex HiF TPEs can be injection moulded, and even parts as large as a full instrument panel skin can be produced with a **cycle time of around 70 seconds**. Helping to reduce energy and production costs.

Dryflex HiF TPEs have a **density of 0.9 g/cm³,** which offers a reduction in total part weight, which in turn helps reduce the CO2 emissions of the vehicle. Additionally, Dryflex HIF TPEs can be **recycled in closed-loop systems** at the end of a parts life.

Dryflex HiF TPEs can also be used in multi-component applications, **with direct overmoulding to polypropylene**. Compared to existing TPU or PU-RIM processes, which often use PC/ABS as the rigid component, the material's ability to adhere to PP can **deliver further cost and weight reduction** in 2K processes.

Read more about Dryflex HiF TPEs

Click to watch a full instrument panel skin being injection moulded



APPLICATION

Inlay Mats

- Non-slip surface
- Custom colours
- UV resistance
- Low Emissions
- Adhesion to PP
- Soft-touch haptics
- Easy processing
- Biobased materials

MATERIALS

Dryflex AM TPE
Dryflex Interior TPE
Dryflex Green TPE

APPLICATION

Floor Mats

- Abrasion resistance
- Low Emissions
- Non-slip / wet-grip
- High flowability
- Fast processing
- Low-density materials
- Custom colours
- Scratch resistance

MATERIAL

Dryflex AM TPE

APPLICATION

Dashboard + Interior Panels

- Abrasion resistance
- UV resistance
- Easy Processing
- High flowability
- Recyclable in closed loop systems
- Low-density materials
- 2K Adhesion to PP
- Energy-efficient production

MATERIAL

Dryflex HiF TPE

APPLICATION

Anti-Squeak Sealing

NVR reduction

2K Adhesion to PP, PC/ABS, PA

Recyclable in closed loop systems

Easy processing

SHORE A / SHORE D Low hardness materials

Optimised compression set

MATERIAL

Dryflex Interior TPE

APPLICATION

HVAC Flap Seals + Components

- Low fogging
- Low odour
- Low VOC emissions
- Optimised compression set
- Noise reduction
- Long term heat stability
- Adhesion to polyolefins
- Faster production

MATERIAL

Dryflex Interior TPE

APPLICATION

Buttons, Handles + Mounts

- Non-slip surface
- Easy to colour
- UV resistance
- Low Emissions
- Adhesion to PP
- Soft-touch haptics
- Easy processing
- Biobased materials

MATERIALS

Dryflex Interior TPE

Dryflex Green TPE

In Summary : TPEs in Automotive Interiors

Key Properties

- Easy processing with high flowability and short cycle times
- Excellent surface properties and haptic
- Low odour and emissions
- Long term heat and UV resistance
- Adhesion to polar and non-polar thermoplastics (e.g. PP, PC/ABS, PA ...)
- Customised colours
- Recyclable in closed-loop systems
- Biobased materials and compounds with recycled content

Key Applications

- Inlay mats
- Floor mats
- Interior trim parts
- HVAC flaps and seals
- Anti-squeak applications
- Cup holders
- Plugs and grommets
- Thumb wheels
- Buttons and grips
- Pedal covers

...

Typical Standards

- BMW GS 93042
- Daimler DBL 5562
- FCA MS-DC-242
- Ford WSS-M2D507, WSS-M2D517
- GM GMW 16233
- Hyundai-Kia MS 220-21
- PSA B62 0300
- Renault 03-10-104
- Scania STD4376-7
- Tesla TM-1010
- Volvo STD 1221,019
- VW 50123, TL 52622

ABOUT US

info@hexpolTPE.com | 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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