

Fomblin® Y45

Perfluoropolyether

Fomblin® Y45 is a fully fluorinated oil especially designed for use as a polymer additive and can be compounded with thermoplastic and elastomeric materials to provide:

- Low coefficient of friction (no stick-slip effect, noise reduction, anti-squeak properties)
- Improved wear and abrasion resistance (leading to an extended working life)
- Better chemical resistance
- Water/oil and stain repellency
- Improved surface smoothness and gloss

All these benefits can be obtained without changing the bulk properties of the host material such as mechanical properties, color, etc.

A concentration of Fomblin® Y45 of about 0.5–2% w/w is sufficient to enhance the final properties of the host material like engineering thermoplastics (PA, POM, PET, polyolefins, etc.), elastomers (EPDM, NBR, HNBR, PU, etc.) and thermoplastic elastomers (TPO, TPV, TPU, etc.).

Fomblin® Y45 is usually used:

- In thermoplastic parts subjected to wear such as gears, sliding-chain conveyors
- In sealing systems like door seals to reduce stick-slip and noise emission
- In rubber rolls to reduce friction
- In fibers to reduce the CoF and improve the water repellency and soil release, etc.

Property	Typical Value	Unit	Test Method
Average molecular weight	4,100	amu	
Volatility, 22 h at 121 °C	< 0.5	%	ASTM 2595
Viscosity at 50 °C	91	cSt	ASTM D445
Density at 23 °C	1.9	g/cm ³	ASTM D4052
Surface tension at 20 °C	22	dyn/cm	ASTM D1331
Refractive index	1.3	n _D ²⁵	ASTM D1747/62
Pour point	–30	°C	ASTM D97
Appearance	Clear liquid		PF 29/142

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