ExxonMobil
Signature Polymers

Exceed™   Exceed™ Flow+   Exceed™ Tough+   ExxonMobil™ EVA

Performance polymers for optimized halogen-free flame retardant wire & cable compounds

Legislation and increasing safety and environmental awareness are driving significant growth in demand for halogen-free flame retardant (HFFR) compounds for wire & cable applications. As a result, the industry is looking to improve the flame retardation, mechanical performance and processability of HFFR compounds. With ExxonMobil's broad portfolio of Signature Polymers, HFFR compounders now have the opportunity to optimize performance across these requirements.

Flame retardation	Mechanical strength	Easy processability

Exploring solutions using ExxonMobil performance polymers

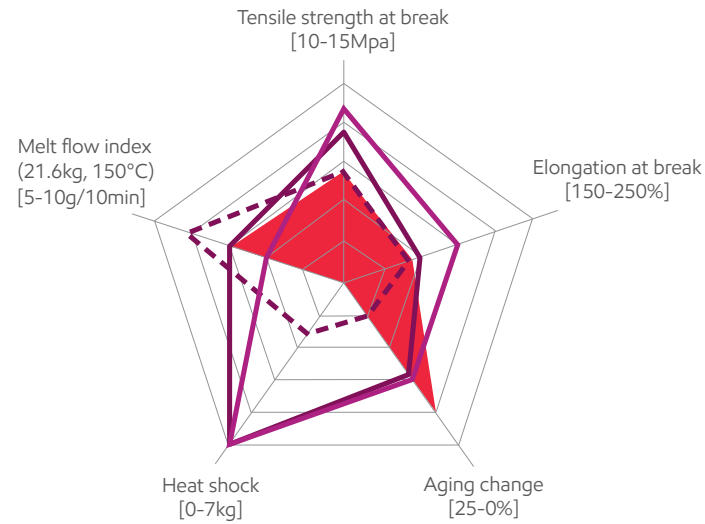**Enhanced flame retardation (FR) by increasing FR filler loading**

	150phr	180phr	
Enhanced performance	Exceed™ Flow+ m 0516	Exceed™ Tough+ m 0516	Outstanding heat shock
Market benchmark	Exceed™ m 3518	Exceed Flow+ m 0516	Improved elongation
Excellent extrudability	Exceed m 3518 & Exceed™ Flow m 15018	Exceed Tough+ m 0516 & Exceed Flow m 15018	Improved extrudability

Mechanical performance

Extrudability

HFFR compound solutions provide improved mechanical properties

- Exceed™ m 3518-based solution offers outstanding heat shock and improved tensile strength
- Exceed m 3518 combined with Exceed Flow m 15018-based solution delivers improved extrudability while maintaining heat shock and tensile properties
- Exceed™ Flow+ m 0516-based solution offers enhanced cable integrity for demanding applications, such as improved tensile and elongation compared to Exceed m 3518

Exceed Flow+ and Exceed Tough+ metallocene PE demonstrate outstanding mechanical strength in high filler loading solution

When targeting increased flame retardation:

- Exceed Tough+ m 0516 provides excellent heat shock performance
- Exceed Flow+ m 0516 provides better mechanical properties
- With Exceed Flow m 15018, our HFFR compound solution delivers improved extrudability while maintaining heat shock and tensile properties

	ExxonMobil™ C4LL 2018	Exceed m 3518	Exceed m 3518 with Exceed Flow m 15018	Exceed Flow+ m 0516
Aluminum hydroxide (4m²/gr)	150phr	150phr	150phr	150phr

Aging (110°C, 10 d): higher change percentage chosen out of either tensile strength or elongation
Data from tests performed by or on-behalf of ExxonMobil
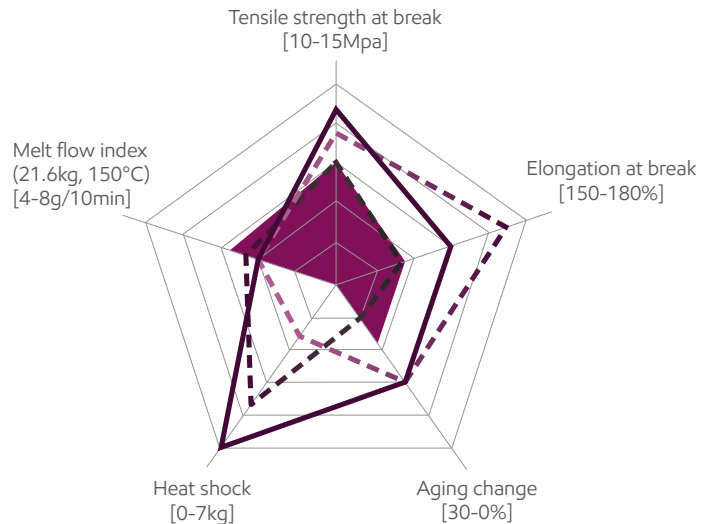
	Exceed™ m 3518	Exceed Tough+ m 0516	Exceed Flow+ m 0516	Exceed Tough+ m 0516 with Exceed Flow m 15018
Aluminum hydroxide (4m²/gr)	180phr	180phr	180phr	180phr

Aging (110°C, 10 d): higher change percentage chosen out of either tensile strength or elongation
Data from tests performed by or on-behalf of ExxonMobil

Test item	Test method
Tensile strength	GB/T 1040.3-2006
Elongation	GB/T 1040.3-2006
Heat shock resistance	GB/T 32129-2015
Limited oxygen index	ExxonMobil test method (MEZ 122) based on ASTM D2863 A
Melt flow index	ExxonMobil test method

Key grade	MI (g/10min)	Density (g/cm³)	VA%
Exceed m 3518	3.5	0.918	–
Exceed Flow m 15018	15	0.918	–
Exxtra™ Seal m 2012	2.0	0.912	–
Exceed Flow m 1020	1.0	0.920	–
Exceed Tough+ m 0814	0.80	0.914	–
Exceed Tough+ m 0516	0.50	0.916	–
Exceed Flow+ m 0516	0.50	0.916	–
ExxonMobil EVA 3027	3.0	–	27.0

Contact us for more information: **exxonmobilchemical.com/pe**

ExxonMobil
Signature Polymers

Bring your impossible

What's new: ExxonMobil Signature Polymers

All our polymers are now positioned under a single portfolio brand: Signature Polymers. The aim is to simplify our product architecture and naming to improve portfolio navigation for you. We would like to stress that our commitment to high quality products remains the same, it is the names that change. Everything else remains the same. We will be making these modifications over the next six months so you will see both old and new grade names highlighted during that time.

Here's a quick overview of brands and grade names that have changed in this document:

Legacy Commercial Name	New Commercial Name
Exceed™ XP 6056	Exceed™ Flow+ m 0516
Exceed™ 3518	Exceed m 3518
Exceed 0015	Exceed™ Flow m 15018
Exceed XP 8656	Exceed™ Tough+ m 0516
Exceed 2012	Exxtra™ Seal m 2012
Enable™ 2010	Exceed Flow m 1020
Exceed XP 8784	Exceed Tough+ m 0814
Escorene™ UL00328	ExxonMobil™ EVA 3027
ExxonMobil™ LLDPE LL1002	ExxonMobil™ C4LL 2018

Some of our existing Exceed, Achieve, Paxon and premium PP/HD grades have moved to Exceed brand; most existing Enable grades have moved to Exceed Flow[+]; most of our existing Exceed XP grades have moved to Exceed Tough[+]; most of our existing Exceed S grades have moved to Exceed Stiff[+]. More details here **https://www.exxonmobilchemical.com/en/brands/signature-polymers/exceed_high_performance_polymers** or contact your ExxonMobil representative to know more.

Want to see what's changed in our portfolio? Go to **exxonmobilchemical.com/sptransform**