



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

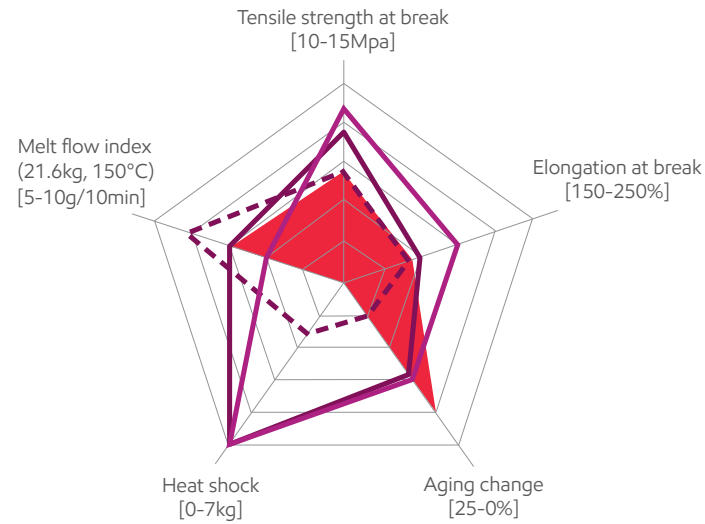
| | 150phr | 180phr | |
|-------------------------|--------------------------------------|--|------------------------|
| Enhanced performance | Exceed™ Flow+ m 0516 | Exceed™ Tough+ m 0516 | Outstanding heat shock |
| Market benchmark | Exceed™ m 3518 | Exceed Flow+ m 0516 | Improved elongation |
| Excellent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



— ExxonMobil C4LL 2018
 — Exceed m 3518
 - - - Exceed m 3518 with Exceed Flow m 15018
 — Exceed Flow+ m 0516

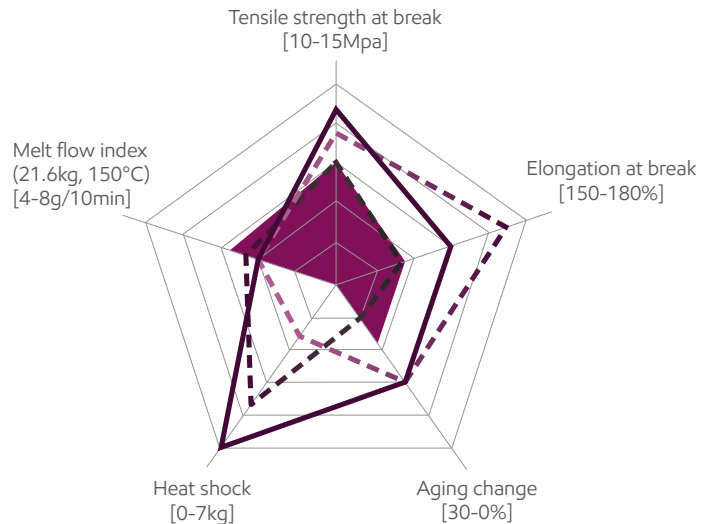
| Aluminum hydroxide (4m ² /gr) | 150phr | 150phr | 150phr | 150phr |
|--|--------|--------|--------|--------|
| | | | | |

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 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



— Exceed m 3518
 — Exceed Tough+ m 0516
 — Exceed Flow+ m 0516
 — Exceed Tough+ m 0516 with Exceed Flow m 15018

| Aluminum hydroxide (4m ² /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/cm ³) | 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](https://www.exxonmobilchemical.com/pe)

ExxonMobil
Signature Polymers

Bring your impossible



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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](https://www.exxonmobilchemical.com/sptransform)