

tomorrow's
performance
today

ExxonMobil performance polyethylene

Performance PE 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 performance PE 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

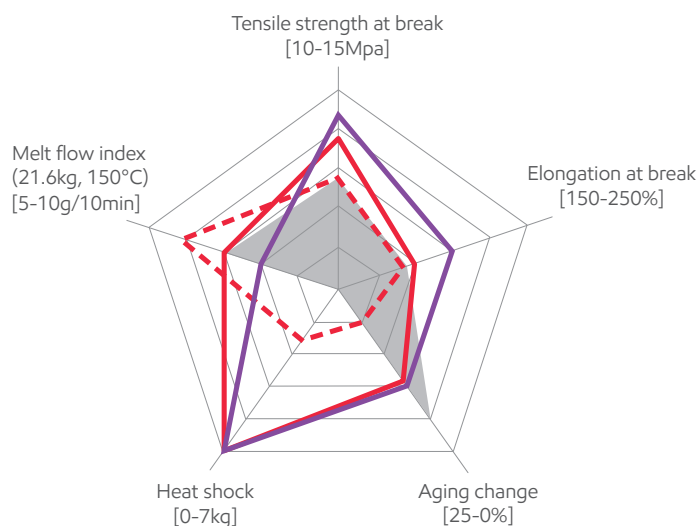
	150phr	180phr	
Enhanced performance	Exceed™ XP 6056	Exceed XP 8656	Outstanding heat shock
Market benchmark	Exceed™ 3518	Exceed XP 6056	Improved elongation
Excellent extrudability	Exceed 3518 & Exceed 0015	Exceed XP 8656 & Exceed 0015	Improved extrudability

Mechanical performance

Extrudability

HFFR compound solutions provide improved mechanical properties

- Exceed™ 3518-based solution offers outstanding heat shock and improved tensile strength
- Exceed 3518 combined with Exceed 0015-based solution delivers improved extrudability while maintaining heat shock and tensile properties
- Exceed™ XP 6056-based solution offers enhanced cable integrity for demanding applications, such as improved tensile and elongation compared to Exceed 3518



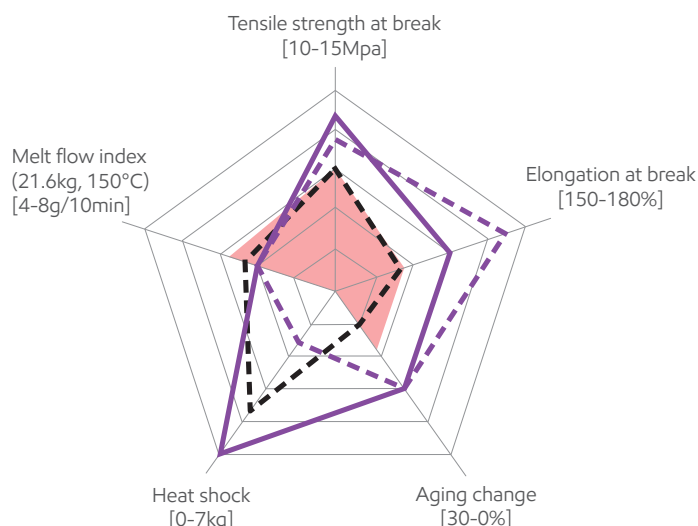
	ExxonMobil™ LLDPE LL1002	Exceed 3518	Exceed 3518 with Exceed 0015	Exceed XP 6056
Aluminum hydroxide (4m ² /gr)	150phr	150phr	150phr	150phr

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 XP performance PE demonstrates outstanding mechanical strength in high filler loading solution

When targeting increased flame retardation:

- Exceed XP 8656 provides excellent heat shock performance
- Exceed XP 6056 provides better mechanical properties
- With Exceed 0015, our HFFR compound solution delivers improved extrudability while maintaining heat shock and tensile properties



	Exceed 3518	Exceed XP 8656	Exceed XP 6056	Exceed XP 8656 with Exceed 0015
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 3518	3.5	0.918	-
Exceed 0015	15	0.918	-
Exceed 2012	2.0	0.912	-
Enable™ 2010	1.0	0.920	-
Exceed XP 8784	0.80	0.914	-
Exceed XP 8656	0.50	0.916	-
Exceed XP 6056	0.50	0.916	-
Escorene™ UL00328	3.0	-	27.0



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