

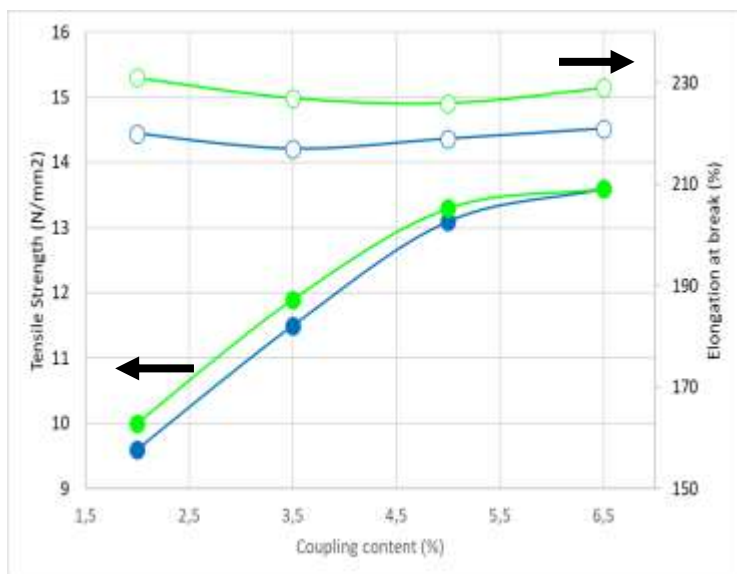


## Introduction:

Aadibond® **EC1206** and **EC1235** are maleated LLDPE especially designed to be the best coupling agents for HFFR/LSZH/ZHFR cable compounds. The performances are described by experimental data in highly crack-resistant formulations used in big armoured cables and containing both fine precipitate ATH and milled MDH.

Formulation	%
EVA28 MFI=3	14,25
POE d=0,87 MFI=5	14,25
mLLDPE MFI=3-5	10 to 3,5
<b>Aadibond</b>	0 to 6,5
ATH Apyral 40CD	50
Natural milled MDH	10
Silicon MB	1,25
Stabilizer / AOx	0,25
TOTAL	100

## Results:



- ✓ Optimal dosage of Aadibond® **EC1206** and **EC1235** is between 3.5 and 5%
- ✓ **EC1235** shows slightly superior mechanical properties

## Melt Flow Index (21.6kg@160°C):

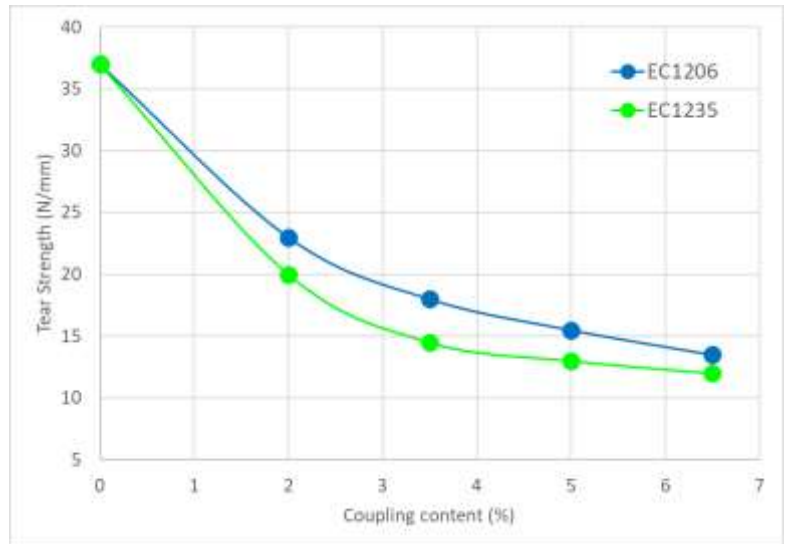
- ✓ **EC1235** shows slightly higher MFI at any dosage

Content of coupling %	MFI with <b>EC1206</b>	MFI with <b>EC1235</b>
0	11,2	11,2
2	8,3	9,1
3,5	7,8	8,8
5	7,4	8,4
6,5	7,1	7,9

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### Tear strength at 23°C:

- ✓ Aadibond **EC1206** gives slightly higher tear strength at any dosage
- ✓ The highest tear strength is WITHOUT any coupling



### Crack-resistance:

Crack-resistance is tested by measuring the propagation of 2mm-deep / 20mm-wide cut on 6mm-thick specimens under bending stress and stored at 50°C into oven



- ✓ Both Aadibond **EC1206** and **EC1235** give excellent crack-resistance: the cut did NOT propagate at all after 5h@50°C and only a little bit after 24h@50°C

### Conclusions:

- ✓ Aadibond EC1235 gives slightly lower values of tear strength at any dosage in comparison to EC1206, but absolutely no any difference into crack-propagation test
- ✓ Optimal dosage of Aadibond to have the best crack resistance is in the range 3.5% to 5%.



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