ELASTOTECH™ AR23

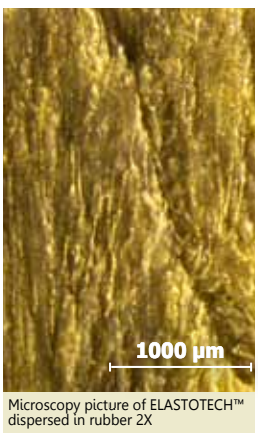
ARAMID FIBER MASTERBATCH

ELASTOTECH™ AR23

is an Aramid fiber in Natural Rubber and processing aid carrier which contain 23%. ELASTOTECH™ AR23 available in a family of rubber matrices such as NR, BR and SBR.

ELASTOTECH™ reinforces unique properties than conventional fillers such as carbon black and silica by increasing stiffness (modulus) with little or no change in hysteresis that can lead to heat build-up. Field-use performance in a range of applications has demonstrated improvements in modulus, cut and tear resistance, wear and creep resistance.

ELASTOTECH™ AR23 (Kevlar Masterbatch)



Microscopy picture of ELASTOTECH™ dispersed in rubber 2X

Benefit of Aramid fiber masterbatch

- Increase hardness via balance elastomeric property.
- Increase modulus especially at low % elongation so can improve high loading, high pressure resistance at low elongation.
- Increase tear strength so can stop cut growth.
- Reduce heat build up in rubber compound.
- Easy to disperse.

☑ Easy to disperse

ELASTOTECH™ is pre-dispersed in a rubber matrix, making it easy to disperse using common mixers in rubber compound manufacturing facilities.

☑ Improved wear and rolling resistance

Adding ELASTOTECH™ 1-5 phr. can improve wear and rolling resistance on tread tires.

☑ Conveying cost savings

ELASTOTECH™ products incorporate into top and bottom belt covers can help companies save cost of maintenance per year.

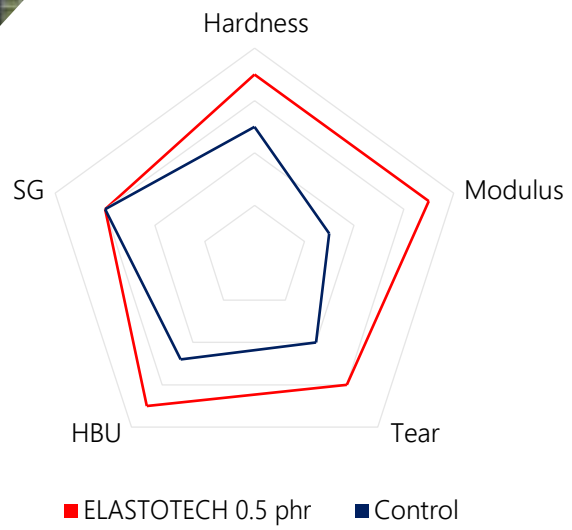
Formulation:

Formulation	No Aramid	Aramid 0.5 phr	Aramid 1 phr	*Aramid 1 phr
NR	75	75	75	75
BR	25	25	25	25
ELASTOFLEX AR23	0	2.17	4.34	4.34
Silica	25	25	25	23
Carbon black	35	35	35	35
Aromatic oil	5	5	5	5
Anti-Ozonant	4	4	4	4
Zno	5	5	5	5
Stearic acid	2	2	2	2
CBS	1.5	1.5	1.5	1.5
Sulphur powder	2	2	2	2
Total PHR	179.50	181.67	183.84	181.84

Property at Machine Direction:

Test Results	Test Method	No Aramid	Aramid 0.5 phr	Aramid 1 phr	*Aramid 1 phr
Hardness (Shore A)	JIS K6253	60	61	62	61
Tensile strength (MPa)	JIS K6251	28	26	26	25
Elongation (%)	JIS K6251	655	610	585	605
50% Modulus (MPa)	JIS K6251	2.4	2.6	2.8	2.8
100% Modulus (MPa)	JIS K6251	3.3	3.6	3.9	3.8
Tear strength (kgf/cm)	JIS K6252	104	118	112	120
SG	JIS K6268	1.156	1.150	1.152	1.148
Heat Build Up	ASTM D623	38.7	36.1	36.7	34.0
Tanδ @60°C		0.185	0.178	0.188	0.153

Note: * Adjust hardness by reduce silica.



Contact:

Tel: (66) 2 375-5197
Fax: (66) 2 375-6503
E-mail: noppakoonl@cheminno.co.th
webmaster@elastomer-polymer.com
Website: www.cheminno.co.th

Distribute by: Chemical Innovation Co., Ltd.
18 Soi Ramkamhaeng 30 (Ban Rao), Hua Mak, Bang Kapi, Bangkok 10240, Thailand.

Manufacture by: PI Industry Ltd.
20 Soi Ramkamhaeng 30 (Ban Rao), Hua Mak, Bang Kapi, Bangkok 10240, Thailand.