



Elastoflex[®] AP 40

Elastoflex[®] AP40 is an Aramid fiber masterbatch in Elastomers and processing aid carrier which contains 40% Aramid fiber content. There are two colors, black color (Elastoflex[®] AP40B) and yellow color (Elastoflex[®] AP40N).

BENEFIT

The high strength of Aramid fiber gives excellent reinforcing performance in rubber compounds. With the superb mixing technology and long experienced in rubber compounds formulation design of Innovation Group, the Elastoflex[®] AP40 is mixed and designed to give good dispersion, improve mixing and moulding process of the final compounds.



APPLICATION



Manufacturing by - PI Industry Ltd.
20 Soi Ramkhamhaeng 30 (Banrao) Ramkhamhaeng Rd.,
Huamark Bangkok, Bangkok, 10240 Thailand
Tel: (66) 3-894-6042 Fax: (66) 3-894-043
www.elastomer-polymer.com/PI Industry

Distributed by : Chemical Innovation Co.,Ltd
18 Soi Ramkhamhaeng 30 (Banrao) Ramkhamhaeng Rd.,
Huamark Bangkok, Bangkok, 10240 Thailand
Tel: (66) 2-375-5197 Fax: (66) 2-375-6503
Email: Jutaratp@cheminno.co.th
www.elastomer-polymer.com/Chemical Innovation

Elastoflex[®] AP40 Processing Guidance

NR
Natural Rubber

NBR
Nitrile Rubber

EPDM
Ethylene Propylene
Diene Rubber

CR
Chloroprene
Rubber

Adding Elastoflex[®] AP40 in the same step of adding polymers. Other steps can be used as normal practices of current compound mixing steps.

As Elastoflex[®] AP40 contains low quantity of elastomer so no need to reduce rubber content in the formulation.

NR

Formulation	No aramid	Aramid 3 phr
Elastoflex AP40	-	7.5
Other Ingredients CB/Silica Filler System	Same	Same

Test Results	Test Method	No aramid	Aramid 3 phr
Hardness, Shore A	JIS K6253	72	75
Tensile strength, kgf/cm ²	JIS K6251	270	238
Elongation, %	JIS K6251	545	510
M100, kgf/cm ²	JIS K6251	25	26
M200, kgf/cm ²	JIS K6251	38	42
M300, kgf/cm ²	JIS K6251	81	83
M400, kgf/cm ²	JIS K6251	135	134
Tear strength, kgf/cm	JIS K6252	73	80
SG	JIS K6268	1.178	1.177

NBR

Formulation	No aramid	Aramid 3 phr
Elastoflex AP40	-	7.5
Other Ingredients Silica Filler System	Same	Same

Test Results	Test Method	No aramid	Aramid 3 phr
Hardness, Shore A	JIS K6253	80	83
Tensile strength, kgf/cm ²	JIS K6251	348	279
Elongation, %	JIS K6251	620	505
M100, kgf/cm ²	JIS K6251	33	45
M200, kgf/cm ²	JIS K6251	45	91
M300, kgf/cm ²	JIS K6251	96	127
M400, kgf/cm ²	JIS K6251	157	172
Tear strength, kgf/cm	JIS K6252	78	92
SG	JIS K6268	1.254	1.253

EPDM

Formulation	No aramid	Aramid 3 phr
Elastoflex AP40	-	7.5
Other Ingredients CB Filler System	Same	Same

Test Results	Test Method	No aramid	Aramid 3 phr
Hardness, Shore A	JIS K6253	76	81
Tensile strength, kgf/cm ²	JIS K6251	163	163
Elongation, %	JIS K6251	260	230
M100, kgf/cm ²	JIS K6251	34	80
M200, kgf/cm ²	JIS K6251	66	94
M300, kgf/cm ²	JIS K6251	131	147
Tear strength, kgf/cm	JIS K6252	60	60
SG	JIS K6268	1.099	1.098

CR

Formulation	No aramid	Aramid 3 phr
Elastoflex AP40	-	7.5
Other Ingredients CB Filler System	Same	Same

Test Results	Test Method	No aramid	Aramid 3 phr
Hardness, Shore A	JIS K6253	69	74
Tensile strength, kgf/cm ²	JIS K6251	237	201
Elongation, %	JIS K6251	350	280
M100, kgf/cm ²	JIS K6251	23	77
M200, kgf/cm ²	JIS K6251	43	90
M300, kgf/cm ²	JIS K6251	119	141
M400, kgf/cm ²	JIS K6251	204	-
Tear strength, kgf/cm	JIS K6252	60	60
SG	JIS K6268	1.390	1.381

Elastoflex[®] AR 23-1



Elastoflex[®] AR23-1 is an Aramid fiber masterbatch in Natural Rubber carrier which contains 23% Aramid fiber content.

Processing Guidance

Adding Elastoflex[®] AR23-1 in the same step of adding polymers. Other steps can be used as normal practices of current compound mixing steps.

However in the Elastoflex[®] AR23-1 contains 50% of Natural Rubber so have to balance Natural Rubber content in the formulation eg. For 4 phr.* of Elastoflex[®] AR23-1 (1 phr.* Aramid fiber) has 2 phr.* of Natural Rubber. The 2 phr.* of Natural rubber has to be reduced in the formulation.

Formulation	No Aramid	Aramid 1 phr	Aramid 3 phr
NR/BR	75/25	73/25	69/25
Elastoflex AR23-1	0.0	4.0	13.0
Silica/Carbon black	35/30	35/30	35/30
Aromatic Oil	5.0	5.0	5.0
Anti-Ozonant	2.0	2.0	2.0
Sulphur powder	2.5	2.5	2.5
TBBS	1.5	1.5	1.5

Test Results	Test Method	No Aramid	Aramid 1 phr	Aramid 3 phr
Hardness, Shore A	JIS K6253	72	73	76
Tensile strength, kgf/cm ²	JIS K6251	265	228	220
Elongation, %	JIS K6251	530	465	450
M100, kgf/cm ²	JIS K6251	38	43	55
M200, kgf/cm ²	JIS K6251	82	84	94
M300, kgf/cm ²	JIS K6251	137	137	143
Tear strength, kgf/cm	JIS K6252	73	78	87
SG	JIS K6268	1.178	1.178	1.178
Tanδ @0°C	-	0.257	0.246	0.240
Tanδ @60°C	-	0.181	0.169	0.174

* phr = part per hundred rubber



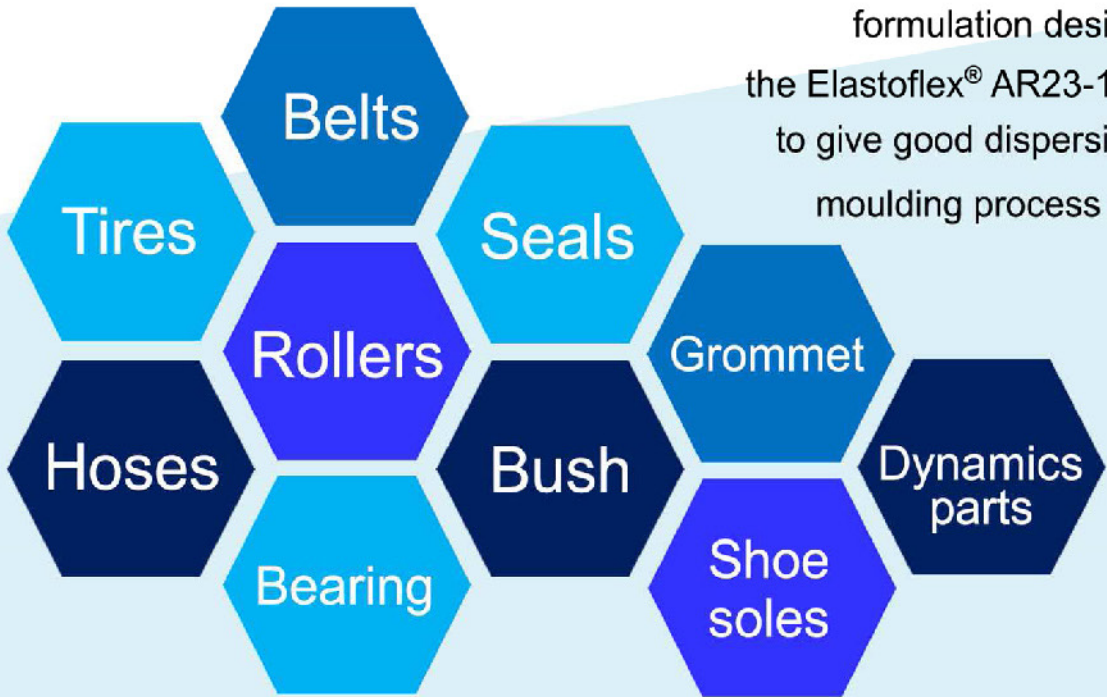
Elastoflex® AR23-1

Adding 4-13 phr. of Elastoflex® AR23-1 (1-3 phr of Aramid fiber) has been shown modulus and tear resistance increasing while lowering of tan δ.
The property can improve performance of end products and give longer life services of end applications.

BENEFIT

The high strength of Aramid fiber gives excellent reinforcing performance in rubber compounds. With the superb mixing technology and long experienced in rubber compounds formulation design of Innovation Group, the Elastoflex® AR23-1 is mixed and designed to give good dispersion, improve mixing and moulding process of the final compounds.

APPLICATION



Distributed by : Chemical Innoation Co.,Ltd

18 Soi Ramkhamhaeng 30 (Banrao) Ramkhamhaeng Rd.,
Huamark Bangkokkapi, Bangkok, 10240 Thailand
Tel: (66) 2-375-5197 Fax: (66) 2-375-6503
Email: Jutaratp@cheminno.co.th
www.elastomer-polymer.com/Chemical Innovation

Manufacturing by : PI Industry Ltd.

20 Soi Ramkhamhaeng 30 (Banrao) Ramkhamhaeng Rd.,
Huamark Bangkokkapi, Bangkok, 10240 Thailand
Tel: (66) 3-894-6042 Fax: (66) 3-894-043
www.elastomer-polymer.com/PI Industry