



## CONSTRUCTION INDUSTRY

### Profile, solid, black

#### Building profile

60 Shore A, EPDM, sulfur cure / steam cure

Specification DIN 7863

Guide formulation of DSM (now Arlanxeo)		V 5842 B
Keltan 512x50	)*	150.0
Zinc oxide		5.0
Stearic acid		4.0
FEF N-550		90.0
SILLITIN N 82	)**	50.0
Process Oil P 460 (ex Sunpar 2280)		40.0
Vaseline		5.0
TMTD		1.0
ZDMC		1.5
ZDBC		1.5
DTDM		1.5
Sulfur		0.5
Total phr		350.0
Density	g/cm <sup>3</sup>	1.13

)\* No longer available. Recommended: Keltan 4450 + 50 phr paraffin oil

)\*\* No longer available. Recommended: SILLITIN N 75

#### Compound preparation

##### 3-D Branbury mixer, volume 47.5 l

Overload	%	10
Batchsize	kg	64
Rotor speed	rpm	35
Mixing method:		
Polymer, zinc oxide, stearic acid, carbon black	min	0-2.5
Rest except accelerators and sulfur	min	2.5-5
Discharge	min	5
Indicated discharge temperature	°C	124

Fed to slab-off mill: accelerators and sulfur



V 5842 B

**Mooney Viscosity**

ML (1+4) 100°C	MU	41
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**Rheometer, 160°C**

Delta S	Nm	3.04
Optimum time	min	10.5
Scorch time	min	3.3

**Berstorff Extruder Ø 90 mm 16D**

Extrusion conditions		no vacuum
Barrel	°C	40-60-80
Head	°C	110
Dimensions of profile	mm	5 x 22

**Physical properties**

**Steam cure @ 160°C**

		<b>25 min</b>	<b>40 min</b>
Hardness	Shore A	58	58
Tensile strength	MPa	11.7	10.3
Elongation at break	%	580	550

**Compression set**

22 h @ -25°C	%	53	51
22 h @ 100°C	%	33	30

**Air aging, 7 d @ -10°C**

Δ Hardness	Shore A	+7	+7
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**Air aging, 7 d @ 100°C**

Δ Hardness	Shore A	-3	-3
Δ Tensile strength	%	+5	-6
Δ Elongation at break	%, rel.	-24	-20
Δ Weight	%	-0.7	-0.7

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