



# FINE CALCIUM CARBONATES IN RUBBER

**Polcarb™ 90** and **Polcarb™ SB** are used where very fine calcium carbonate is required in rubber compounding without resorting to the expensive precipitated calcium carbonates.

Such applications include high quality extrusions and domestic products. Calcium carbonates are useful where rubber items of lower hardness are required. **Polcarb™ 90** and **Polcarb™ SB** impart higher reinforcement than conventional coarse grade carbonates - the hot-tear strength is often significantly higher.

**Polcarb™ 50SV**, **Polcarb™ 60 / 60SV** and **Polcarb™ 60S** are less fine than **Polcarb™ 90** and **Polcarb™ SB / SV** but still have a very low level of coarse particles present making them suitable for production of high quality extrusions and mouldings.

The three stearate-treated products, **Polcarb™ SB**, **Polcarb™ 60S** and **Polcarb™ 50SV**, have some advantages; The stearate coating can give:

- Improved processability
- Better dispersion
- Reduced curing cycles
- Higher mechanical performance
- Improved extrudability

Water absorption of **Polcarb™ 60S** is especially low making this product suitable for cable insulations and for use in extruded products cured by low-pressure methods such as salt bath and fluidised bed.

## APPLICATIONS

Power Cable Insulation	phr
Keltan720	100
Zinc oxide	5
Stearic acid	1
PoleStar™ 200R	75
Polcarb™ 60S	75
Vinyl silane	1.0
Sunpar 2280	25
Paraffin wax	5
Flectol H	1.5
Rhenofit TAC/S	2.0
Perkadox BC40	7.0

Mechanical Properties	phr
Tensile Strength (MPa)	8.5
Elongation at break (%)	270
Hardness (IRHD)	64
Volume resistivity at 20°C (ohm.cm)	1.2x10 <sup>15</sup>
Tensile Strength (MPa)	6.5
Elongation at break (%)	270
Hardness (IRHD)	65
Compression set at 70°C (%)	38.4

Low cost extrusion compound	phr
Vistalon 3708	100
N550 Black	150
N762 Black	100
Polcarb™ 60	100
Sunpar 150	200
Zinc oxide	5
Stearic acid	1
Sulphur	2.5
MBT	1.5
TMTD	4

*The information contained herein was obtained as a result of work carried out on materials thought to be representative and accordingly is believed to be correct. Such information shall not, however constitute any representation, condition or warranty as to any fact contained herein, and accordingly IMERYS Minerals Ltd hereby disclaims all and any liability arising from the use of such information howsoever caused.*



**IMERYS PERFORMANCE & FILTRATION MINERALS**  
 Par Moor Centre, Par Moor Road, Par, Cornwall, UK PL24 2SQ  
 t: +44 (0)1726 818000 f: +44 (0)1726 811200  
 e: perfmins@imerys.com  
 www.imerys-perfmins.com

154 rue de l'Université, 75007 Paris - France  
 t: +33 1 49 55 66 37 f: +33 1 49 55 66 57  
 e: info.europe@worldminerals.com  
 www.worldminerals.com