

B.T.R.C.	TECHNICAL DATA SHEET – T.D.S.		
Rubber Granulates and Powders Physically Active Rubber (P.A.R.) PAR grade 1427E	Issue: 1	TDS	
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1. DEFINITION AND BRAND

1.1 Identification of the product	Physically Active Rubber (P.A.R.) powder. (Recycled rubber powder from end of life tyres)
1.2 Definition	P.A.R. is defined as Physically Active Rubber (short PAR) grade 1427 E which is recycled rubber obtained from treads of EOL OTR tyres with diameter above 1,4 m.
1.3 Origin	This recycled powder PAR has been obtained by using the BTRC Ultra High Pressure (UHP) water jetting technology. This technology is without any mechanical grinding or shredding obtained in the BTRC UHP process at ambient temperature.
1.4 Identification of the company	BTRC bvba (Big Tyre Recycling Corporation) www.btrc.be tel + 32 9 223 75 30 Martelaarslaan 432, B-9000 Gent Belgium TVA 889.764.469

2. MAIN PROPERTIES

2.1 Main property	The PAR is an active rubber powder that can be vulcanised in compounds to substitute NR (or SBR) completely or in very large quantities depending on the requested properties.		
2.2 Vulcanisation requirements	The use of PAR in compounds requires compensation of sulphur and accelerator in the same proportion as for NR / SBR to make a full vulcanisation of the compound.		
2.3 Physical properties	Appearance: Black powder Moisture Content : < 0.5 % MC (@ 20°C) Free metal content cfr ASTM D 5603,7.3.2 $\leq 0.1\%$ Free fibre content cfr ASTM D 5603.7.4 $\leq 0.5\%$ Density powder 1,12 Density at packing 0.45 – 0.55		
2.4 Technical properties of a compound with PAR	PAR/NR (SVR 10) 66/33		
	Rheometer data MDR 30' @ 150°C		
	MI (dNm)		2,37
	T2 (min:s)		1:07
	T90 (m:s)		8:56
	MH (dNm)		17,39
	Vulcanisation @ 150°C 2 x t 90		
	Hardness (°Sh A)		66
	Tensile strength (MPa)		9,67
	Mod 100% (MPa)		2,31
	Elongation at rupture (%)		274
	Abrasion mm ³		190,9
	Mooney Viscosity ML(1+4) @ 100°C		50,2
	Specific Gravity (Kg/dm ³)		1,120
2.5 Chemical properties	Extraction with acetone	Extraction	6,18%
	TGA analysis ISO 1029 ADD	Volatile products	4,80%
		Polymer	58,80%
		Carbon black	31,90%
		Ashes	4,50%

**Rubber Granulates and Powders
Physically Active Rubber (P.A.R.)
PAR grade 1427E**

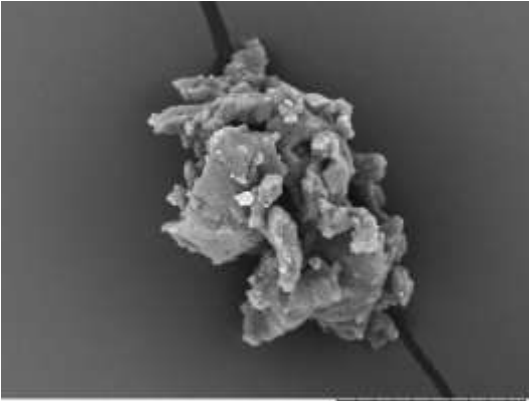
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2.6 Sieving analys	<p>The size of the grains does not influence the vulcanisation properties of the PAR.</p> <table border="1" data-bbox="472 524 943 837"> <thead> <tr> <th>Sieving</th> <th>Retained</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>>0,6 mm</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>0,4</td> <td>39%</td> <td>39%</td> </tr> <tr> <td>0,2</td> <td>26%</td> <td>65%</td> </tr> <tr> <td>0,1</td> <td>21%</td> <td>86%</td> </tr> <tr> <td>< 0,1</td> <td>14%</td> <td>100%</td> </tr> <tr> <td></td> <td>100%</td> <td>100%</td> </tr> </tbody> </table>	Sieving	Retained	Total	>0,6 mm	0%	0%	0,4	39%	39%	0,2	26%	65%	0,1	21%	86%	< 0,1	14%	100%		100%	100%
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2.7 Surface appreciation	<p>S.E.M. Scanned Electronic Microscope picture of PAR grade 1427E. Enlargement : 1.000 X Surface ratio approx. 0,9 m² /gram at a particle size of 50 µm–800 µm.</p> 																					
2.8 REACH	<p>REACH registration number: Not available, exemption 2(7)(d) of REACH regulation EC/1907/2006.</p>																					
2.9 Packing	<p>Packaging: Big bags 500kg or 1.000 kg</p>																					