



Himadri Speciality Chemical Ltd

PRODUCT DATA SHEET

KLAREX RG 223 Carbon black

Introduction

Automobile rubber components often use carbon black in excess of 30-35% by weight to optimize product performance, cost and manufacturing efficiency. Himadri Speciality Chemicals limited, aptly supported by its state-of-the-art Research & Development facility are focussing on developing clean grades under “KLAREX” Series to cater to the needs of the customers in MRG segment products like weather strip, Extrudate profiles, Hose, seals etc.

General Description

KLAREX RG 223 is semi-reinforcing type Carbon black similar to ASTM N550 carbon black colloidal properties as per ASTM D1765 and with improved morphological features.



Properties	TestMethod	Units	Typical Values
Iodine Absorption	D1510	mg/kg	43
Number STSA	D6556	m ² /g	39
Oil Absorption Number	D2414	ml/100g	123
Crushed Oil Absorption Number	D3493	ml/100g	82
Retention at #325 mesh	D-1514	ppm	<15
Pellet Hardness	D-5230	gf	25

Performance Features

KLAREX RG 223 with similar loading of N550 provides better dispersion with easier processing performance of rubber compounds. Extrudates show fast extrusion rate with improved green strength, dimensional stability and less die swell. Vulcanizates show smoother surface with significantly lower surface defects.

Technical Data

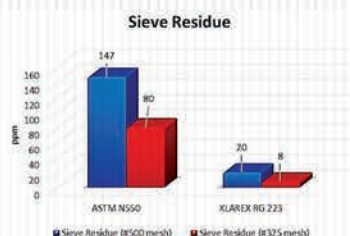
KLAREX RG 223 was mixed in EPDM based compound and the table below shows the Processing and vulcanizate properties.

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HSC is responsible for colloidal properties written on it as per our test

results and in no way responsible for further processing as HSC has no control on many ingredients used in further processing.
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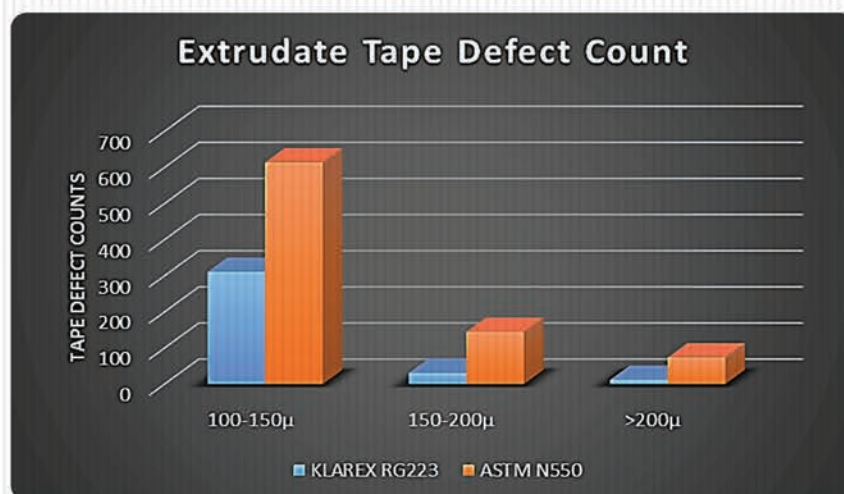
Parameters

	KLAREX RG 223	ASTM N550
ML(1+4) at 100°C	43	44
Modulus at 100%, (MPa)	3.98	4.1
Modulus at 300%, (MPa)	12.6	13.2
Tensile strength, (MPa)	14.1	15.43
Elongation at Break, (%)	328	343
Hardness (Shore-A)	68	69

(Test Formulation 100 EPDM, 80 Black, 50 oil, ZnO:5, St.Ac:1, MBT:0.5,TMTD: 1, Sulphur:1.5)

Defect Count Analysis

Laboratory extruder used to make continuous tapes of 0.5 mm thickness & width of 40 mm. For each black grade 5 samples used for microscopic analysis with 196 cm² area under investigation. Digital Microscope was used for the quantitative analysis of surface defects using in-built software. The observed surface defect was segregated in three categories; viz., 100-150Q, 150-200Q and >200Q. It is observed that KLAREX RG223 results in substantial reduction in surface defect counts as compared to ASTM N550 leading to Defect free profile surface.



Typical Application

- » Extruded automotive profiles, weather strips
- » Hose
- » Seals & moulded rubber goods
- » Miscellaneous Automotive component