

LIST OF ABBREVIATIONS

Abbreviation	Explanation
M_z	Aligning torque
BIRC	Brazil, India, Russia and China
BE	Breaking energy
TESPT	Bis(triethoxysilylpropyl)-tetrasulfan (TESPT)
CAD	Computer aided design software
CAE	Computer aided engineering software
Tc50	Cure time (50%) in rheometer
Tc90	Cure time (90%) - optimum cure time
CB	Carbon Black
F_G	Contact force
XNBR	Carboxylated nitrile rubber
F_D	Driving force
EB	Elongation at break
ESBR	Emulsion styrene butadiene rubber
FSSBR	Functionalized solution styrene butadiene rubber
FEA	Finite element analysis
ΔG_i	Free Energy
T_g	Glass transition temperature of rubber
$\mathcal{H}$	Heat development rate
P_{in}	Input power
F_y	Lateral force
E''	Loss modulus
J''	Loss compliance
MES	Mild extract solvent

M100	Modulus at 100% strain
M200	Modulus at 200% strain
M300	Modulus at 300% strain
ML	Min. rheometric torque
MH	Max. rheometric torque
MMT	Montmorillonite clay
G	Modulus of the filled system
G ₀	Modulus of unfilled system
F _Z	Normal force
NR	Natural rubber
P _{out}	Output power
M _X	Overturning moment
OLS	Organic layer silicate
BR	Polybutadiene rubber
PCR	Passenger car Radial
$\mathcal{P}_R$	Power Loss
RAE	Residual aromatic extract
RR	Rolling Resistance
F _{RR}	Rolling resistance force
C _R	Rolling resistance coefficient
M _X	Rolling resistance moment
Ts2	Scorch time (process safety) in rheometer
W	Strain energy function
I	Strain Invariant
SBR	Styrene butadiene rubber
SSBR	Solution styrene butadiene rubber
G' ₀	Shear Modulus at very low strain

E'	Storage modulus
G'_{∞}	Shear Modulus at very high strain
V	Speed
TBR	Truck Bus Radial
TEM	Transmission Electron Microscopy
F_x	Tractive force
TDAE	Triple distillate aromatic extract
TS	Tensile strength
$\tan \delta$	Tangent delta [Loss Modulus (E'')/Storage Modulus (E')]
R	Universal Gas Constant
WXR	Wide angle X-ray diffraction
W_a	Work of adhesion
X	X -axis
XRD	X-ray diffraction
Y	Y-axis
Z	Z-axis