# PT SIDDHARTA MANDIRI INDONESIA

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## SL-2201

# NOVOLAC REINFORCING RESIN

**DESCRIPTION** SL-2201 is a thermoplastic cashew nut shell oil (CNSL) modified phenol-formaldehyde novolac resin.

### CHARACTERISTICS

Property	Specification	Test Method
Appearance	brown pastille	visual
Softening Points, Ring & Ball, T	80 - 100	WI-QC-102
Weight Loss,65 °C, %	0.5max	WI-QC-104
Ashes, 550±25℃,%	0.5max	WI-QC-103

#### **PROPERTIES**

- SL-2201 is a thermoplastic resin and exhibits good solubility in BR, SBR, CR and NBR rubbers.
  During the vulcanization of rubber compounds, SL-2201 is function as a softening agent, plasticizer
  and an adhesion promoter. The cross-linking reaction of SL-2201 with a methylene donor produces
  rubber compounds with superior reinforcement and hardness properties.
- In addition to enhanced hardness, SL-2201 resin significantly improves the abrasion resistance, tear resistance, tensile strength and modulus properties of rubber compounds. The elongation of cured rubber is decreased only slightly.
- SL-2201 can also function as an adhesion promoter. Therefore, this resin used in the manufacture
  of various reinforced rubber articles.
- 4) With SL-2201 resin, the Mooney viscosity of rubber compound could be reduced, which in turn could improve the filler dispersions of various rubbers.

### APPLICATIONS

- SL-2201 is mainly used in bead area of tires, rubber soles and car window sealing strips.
- It is suggested that SL-2201 can be used at about 5~15 phr levels. At the same time, 7~10%(wt%)
  hexamethylenetetramine(HMT) or hexamethoxymethylmelamine (HMMM) as methylene donor
  should be added.
- In order to avoid the scorching problem of rubber compounds, SL-2201 resin should be added during the first mixing stage. The methylene donor should be added with an accelerator and sulfur at the final mixing stage.

PACKAGING 25kg (net weight), kraft bag inner PE coated or PE bag.

**STORAGE** This material can be stable for 9 months under the normal storage conditions. However, precautions must be taken to avoid exposure to sunlight and always, store this material in a sealed container under the dry and cool conditions

### OCCUPATIONAL SAFETY AND HEALTH INFORMATION

Consult the Material Safety Data Sheet prior to using this resin.