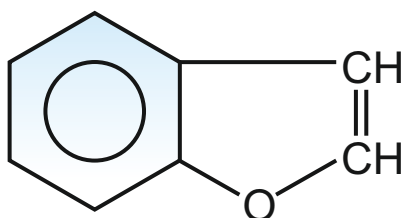


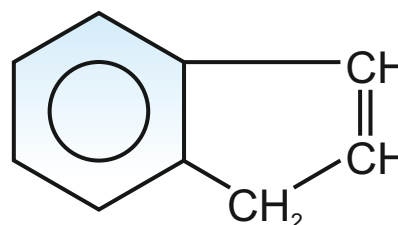
SYNTHETIC C.I. RESIN - COUMARONE INDENE RESIN (TACKIFIER CUM PROCESS AID)

Synthetic C.I. Resin - COUMARONE INDENE RESIN is synthesized by modification of Rosin by the addition of Allyl group into the chain structure. It is empirically represent as $C_{17}H_{14}O$.

COUMARONE



INDENE



Because of the presence of the double bond in the side chain → possessed by the Allyl group, makes C.I. resin responsible for having free double bond in polymeric chain structure, thereby gives excellent Green Tack to the Rubber compounds. This double bond is also get cured in the vulcanisation process.

Depends on the Coumarone, Indene ratio in the C.I. Resin, a wide range of grades can be produced having the melting point between 60°C & 140°C and the colour ranging from bright yellow to Dark brown colour. C.I. Resins are chemically inert and have good electrical insulation properties. It is soluble in hydrocarbons, ketones & esters.

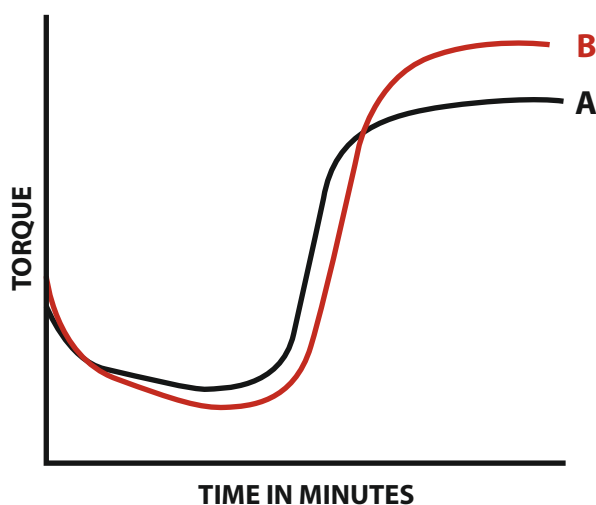
C.I. Resin is used as the excellent Tackifier and processing aid in the compounding of range of Rubbers viz. NBR, CR, EPDM, CSM, CPE, NR, ACRYLIC RUBBERS, MILLABLE PU....

During the mixing cycle of the rubber compound, C.I. RESIN is added at the early stage of the mixing when mixed in the 2-roll mill and in Kneader or Banbury, it can be used along with the addition of fillers.

It is also used as tackifier in the Rubber based contact adhesives.

C.I. Resin finds its usage in other applications, namely in the manufacture of the resin slabs for floor, linoleum, glues, adhesive insulating tape, artificial leather, as a binder in the manufacture of abrasive tools, as impregnation for paper & textiles to ensure water resistance. Due to its wide compatibility & solubility, C.I. resin is used in paints, varnish, printing ink and as softener for Plastics.

A typical illustration in NBR standard moulding compound as shown in the figure below, shows, C.I. Resin improves the flow of the compound and because of its plasticizing nature it aids in better dispersion of the fillers and thereby the maximum torque is increased which in turn gives improved Tensile values & better Tear Strength.



A - WITHOUT C.I. RESIN
B - WITH C.I. RESIN

TYPICAL PROPERTIES FOR COMPARISON PURPOSE ONLY

RHEOLOGICAL PROPERTY:

S. No.	CHARACTERISTICS	COMPOUND A (Without C.I. Resin)	COMPOUND B (with 5 phr of C.I. Resin)
1	Initial Viscosity(MI)	48 units	52 units
2	Minimum Viscosity(ML)	22 units	20 units
3	Scorch time Ts2	2.8 mins	2.9 mins
4	Tc90- Optimum cure time	4.8 mins	4.8 mins
5	Maximum Torque	88 units	96 units
6	Thermoplasticity (MI-ML)	26 units	32 units

ON PHYSICAL PROPERTY:

7	Tensile Strength (Kg/cm ²)	180 kgf/cm ²	195 kgf/cm ²
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TYPICAL SPECIFICATION OF C.I.RESIN

FORM	Light Pale Translucent Lump
COLOUR	Yellowish Brown
Softening point, in °C	75 – 85 °C
Acid value	200 ± 10
Ash Content, %	< 0.2%
BRAND NAME	DG-TACK 80

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