

CASCOPHEN RL-5560G

CASCOPHEN RL-5560G is an oil soluble, heat reactive phenolic resin available in coarse crushed form. It is developed specifically for formulating solvent-based polychloroprene (e.g. Neoprene, Bayprene, Denkaprene and Skyprene) contact adhesives where complete non-phasing systems are required.

CASCOPHEN RL-5560G based adhesives have outstanding qualities of lightness in colour, high heat resistance and optimum initial cohesive strength.

Solvents:

Depending on the final requirement, typical solvents used are blends of aliphatic and aromatic hydrocarbons with varying portions of such oxygenated solvents as ketones and esters. Chlorinated solvents are also used when non-flammability of the "wet" adhesive is required.

Product Physical Properties: (at time of manufacturing)	
Appearance	Yellow lumps
Ring & Ball Softening Point	85 - 105°C
Methylol Content	8 - 12%
Hexane Tolerance @ 25°C	Above 50 ml
Methanol Tolerance @ 25°C	20 - 40 ml

General Compounding:

Although simple mixing of rubber, resin and metal oxides in solvents can be used to prepare contact adhesives, the polychloroprene rubber is recommended to be masticated on a two-roll mill to reduce crystallinity and improve solubility. Mill time and shear are frequently used to control adhesive viscosity. Metal oxides and anti-oxidants are compounded into the rubber during the milling operation. The milled stock is then dissolved with CASCOPHEN RL-5560G to give the finished adhesive.

SUGGESTED ADHESIVE FORMULATION:

(I)	With Milling Facility
Part A	Parts by weight
Antioxidant	2
Magnesium Oxide (fine grade)	4
Polychloroprene	100
Solvent	333
Zinc Oxide (Active type)	5
Mill all compounding ingredients into rubber base and dissolve base to 25% solids in solvents.	

Part B	Parts by weight
CASCOPHEN RL-5560G	45
Magnesium Oxide (fine grade)	4.5
Solvent	50
Water	0.5
Add CASCOPHEN RL5560G resin, magnesium oxide and water to the solvent in a reaction vessel equipped with a condenser. Raise solution temperature to 50-60°C and hold for 5 hours to complete the reaction. Cool to room temperature. To prepare adhesive, combine Parts A and B, dilute mixture with solvent to the required solids content.	

(II)	Without Milling Facility
Part A	Parts by weight
Antioxidant	2
CASCOPHEN RL-5560G	45
Magnesium Oxide (fine grade)	6
Polychloroprene	100
Solvent	474
Zinc Oxide (Active type)	5
To prepare adhesive, dissolve all the ingredient in the solvent.	
Note: For adhesive preparation using this method, polychloroprene used should be of low to medium Mooney and the recommended agitator speed is in the range of 150 - 300 rpm.	

Handling Characteristics:

Prolonged contact with resin can cause irritation of the skin, eyes and respiratory tract, or dermatitis. Therefore, personnel should be provided with protective clothing, gloves, eye protection and dust masks.

Storage:

CASCOPHEN RL-5560G should be stored in a cool, dry environment. Storage under high temperature will darken the resin colour. The life of resin kept in its original packing is at least one (1) year at 32°C.



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