

HIND ELASTOMERS PVT LTD
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Contributing to the environment and society
using coal chemistry as our core technology.

COUMARON RESIN



NITTO CHEMICAL CO.,LTD

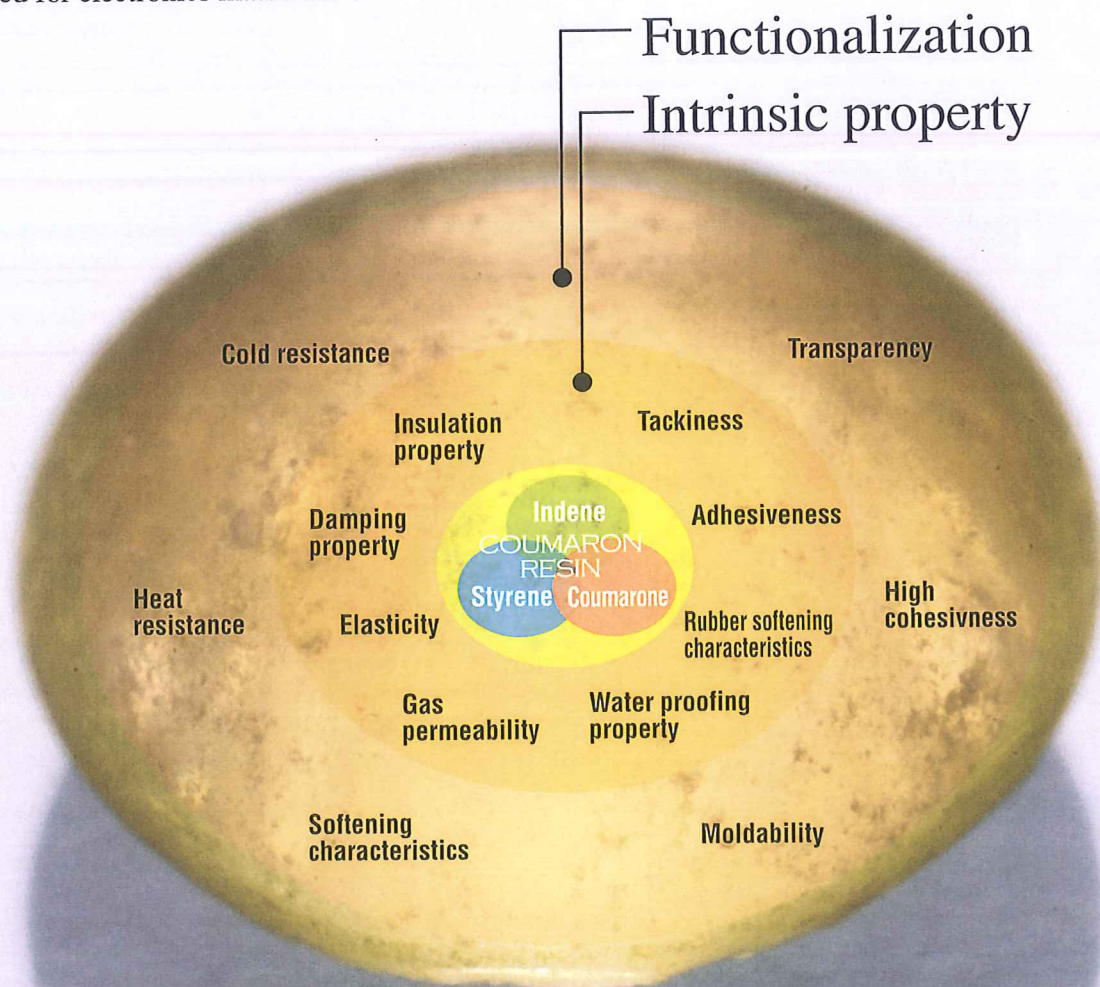
COUMARON RESIN

While making the most of our independent manufacturing skills, it improves the capability of various types of rubber and resins.

Coumarone Resin, well known as Coumarone-indene resin is a co-polymer mainly composed of coumarone, indene, and styrene.

As the only manufacturer of coumarone-indene resin in Japan, Nitto Chemical has been improving manufacturing skills and developing new products many years, thus are now proud of exhibiting high quality.

Unlike those of petroleum resins, our coumarone resin displays great fluidity and compatibility, which makes it effectively usable as a modifier in the field where high adhesive property, mechanical and electric properties, and work efficiency are required. It shows great effect of promoting to improve properties in various kinds rubbers, and tackiness/adhesiveness and anticorrosive properties in adhesives and paints, and also of reducing melt viscosity, water absorption and permittivity of high-functional epoxy-resins used for electronics materials.



Brand name and standard characteristics of Coumarone Resin

Brand name	G-90	V-120	V-120S (Low-oder type)	L-5	L-20
Characteristics					
Appearance	Bead	Bead	Bead	Liquid	Liquid
Number of colors(Gardner)	16 max	16 max	16 max	Dark-brown	Blackish-brown
Softening point(°C)	90	120	120	—	—
Viscosity (mPa·S)	—	—	—	500	2000
OH Value(mg KOH/g)	25	30	30	50	65
Acid number(mg KOH/g)	1.0 max	1.0 max	1.0 max	1.0 max	1.5 max
Specific gravity(15/4)	1.11	1.14	1.14	1.09	1.10
Molecular weight	770	960	950	160	220

※Shown above are typical value, but not guaranteed.

Test method

●Color number...JIS K 5600-2-1

●Viscosity... BM type No.2 (L-5), BM type No.4(L-20)

●Specific gravity (bead type)...JIS Z 8807, Specific gravity (liquid type)...JIS K 5600-2-4

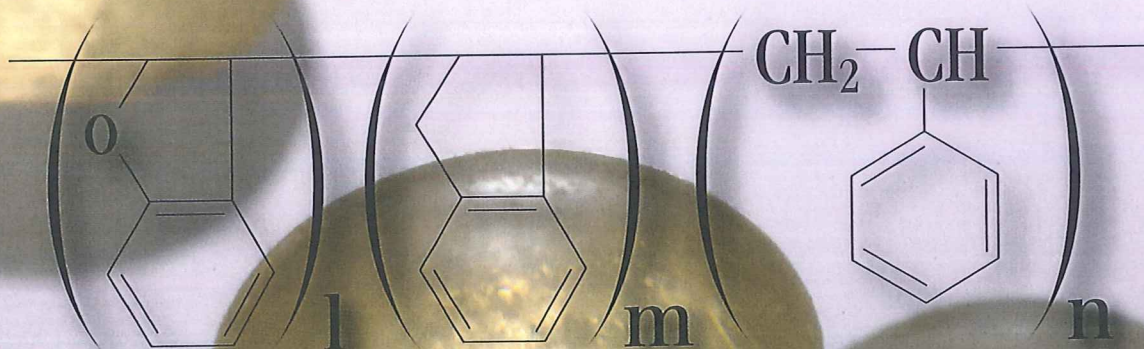
●Weight-average molecular weigh...GPC

●Softening point ... JIS K 2207

●OH value...JIS K 0070

●Acid number...JIS K 5601-2-1

Composition diagram



Major applications of Coumarone Resin

1. Agglutinant/adhesives (G-90, V-120, V-120S)

Used widely as a tackifier for the hot-melt type, solvent type and emulsion type adhesives and adhesive tapes. A low-level odor type(V-120S) is provided for the hot-melt application.

2. Rubber compounding agent (G-90,L-5, L-20)

As a tackifier and softener for natural rubber and synthetic rubber, Coumarone Resin will help improve the performance and workability. The L-type is easy to blend and used for wide-ranging purposes.

3. Paint (V-120)

It has improved solubility in various solvents and improved compatibility with resin or oils and fats. It is used for paint for vessels, paint for automobiles, and silver paint.

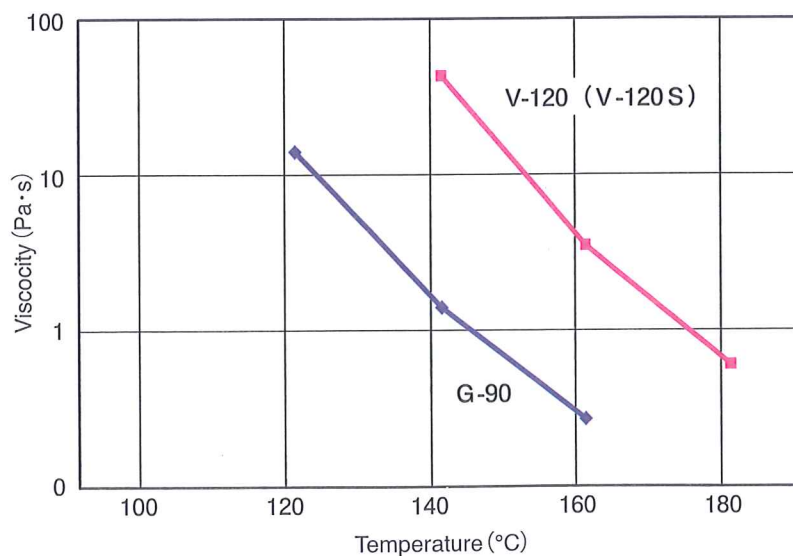
※ Contact us for specifications other than the above.

Compatibility with various Resins

Resins, and fat&oils	Brand name	G-90	V-120	V-120S (low-odor)	L-5	L-20
Acrylic resins		P	C	C	C	C
Amino resins		P	C	C	C	C
Alkyd resins		P	C	C	C	C
Cellulose derivatives		I	C	C	C	C
Chlorinated hydrocarbons		C	C	C	C	C
Natural rubbers		C	P	P	C	C
Synthetic rubbers		C	P	P	C	C
Epoxy resins		C	C	C	P	P
Hydrocarbon resins		C	C	C	C	C
Fatty oils		C	C	C	C	C
Plasticizer of ester type		C	C	C	C	C
Natural resins		C	C	C	C	C
Phenol resins		P	C	C	C	C
Rosin & its derivatives		C	C	C	C	C
Coal tar& pitch		C	C	C	C	C
Vinyl resin & co-polymers		P	C	C	P	P
Waxes		C	C	C	C	C
Polyamides		I	C	C	C	C
Proteins		I	C	C	C	C
Silicones		C	C	C	C	C

C=Compatible P=Partially compatible I=Incompatible

Melt viscosity of Coumarone Resins



Coumarone Resin's solubility in various Solvents

Brand name Name of solvents	G-90	V-120	V-120S (low-odor)	L-5	L-20
Benzene	○	○	○	○	○
Toluene	○	○	○	○	○
Xylene	○	○	○	○	○
Solvent naphtha	○	○	○	○	○
Mineral spirit	○	○	○	○	○
Dipentene	○	○	○	○	○
Methyl alcohol	×	×	×	×	×
Ethyl alcohol	×	×	×	×	×
Isopropyl alcohol	×	×	×	△	△
n-butyl alcohol	×	×	×	○	○
Secbutyl alcohol	×	×	×	×	×
Isoamyl alcohol	×	×	×	×	×
Benzyl alcohol	○	○	○	○	○
Glycerine	×	×	×	○	○
Ethylene glycol	×	×	×	×	×
Ethyl acetate	○	○	○	○	○
Amyl acetate	○	○	○	○	○
Dibutyl phthalate	△	△	△	○	○
Diethyl ether	○	○	○	○	○
Dioxane	○	○	○	○	○
Furfural	○	○	○	○	○
Acetone	○	○	○	○	○
Methyl ethyl ketone	○	○	○	○	○
Methyl isobutyl ketone	○	○	○	○	○
Cyclohexanone	○	○	○	○	○
Cyclohexane	○	○	○	○	○
Tung oil	⊗	⊗	⊗	○	○
Linseed oil	⊗	⊗	⊗	○	○
Carbon tetrachloride	○	○	○	○	○
Chloroform	○	○	○	○	○
Chlorinated paraffin(40%)	⊗	⊗	⊗	○	○
Trichloroethylene	○	○	○	○	○
Nitropropane	○	○	○	○	○

(Remarks) ○ : Easily soluble within 10 min. stirring at 20°C. ○ : Soluble within 10min.~20min. stirring
 △ : Partially soluble at 20°C, soluble when heated to 30°C~50°C.
 ⊗ : Insoluble at 20°C, soluble when heated to softening point and left for 24 hours. × : Insoluble

COUMARON RESIN

Regulatory information and packing type

Brand name	Fire and Disaster Management Act	Packing type			
		Paper-bag	Flexible-container	Cane	Oil drum
Coumarone Resin G-90	—	20kg	500kg	—	—
Coumarone Resin V-120	—	20kg	500kg	—	—
Coumarone Resin V-120S	—	20kg	1,000kg	—	—
Coumarone Resin L-5	Dangerous Category 4, petroleum-category3, dangerous grade III	—	—	18kg	200kg
Coumarone Resin L-20	Dangerous Category4, petroleum-category3, dangerous grade III	—	—	18kg	200kg

Caution

Read Safety Data Sheet(SDS) before using the products written on the catalog.
Contact our sales representatives for Safety Data Sheet(SDS).

Information herein is based on our knowledge and learning at the present moment, but no guarantee of any kind is made as to its substance released or results to be obtained from them

- ①Handle carefully since evaluation of danger and toxicity is not adequate, though substance mentioned is made based on all the data currently available.
- ②The information contained is prepared with close testing but no warrant for any results is made. We assume no liability resulting from its use and it is up to users to determine conditions suitable to use and its applications.
- ③The information does not assure recommendation or use of any patents.

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