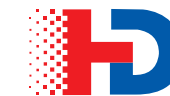




**合成树脂**  
Synthetic Resins

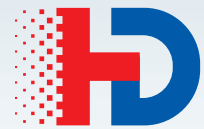


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**HONGDA GROUP LIMITED**





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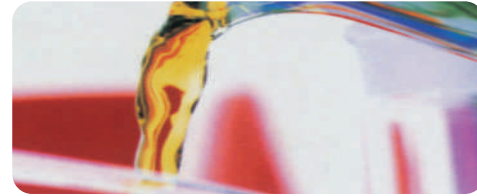
## 公司简介 BRIEF INTRODUCTION

洪大集团有限公司创始于1992年，是专业于涂料工业原料及各种添加剂，树脂的研发等技工贸一体型企业。公司一直致力于技术开发和新产品的研制和生产。良好的服务和信誉始终体现在与客户和生产厂家之间稳定的业务发展中。并于2008年与宁波恒河集团形成战略联盟，共同进行石油树脂的生产和研发，能对产品的质量，价格，包装，运输提供良好的保障。以甬华为品牌的系列产品已经得到广大客户的肯定。

Hongda Group Limited located is in Ningbo, China, which initiated its business in 1992 and engaged itself in the field of technology creation, manufacture and international trade, is an enterprise specializing in the production of coating raw materials such as resins, additives, and pigments, etc. As one of our commitment to our customers, we attach great importance to research and development. We provide best service and keep our credit in developing stable business with our oversea clients and manufacturers. In 2008 we formed a strategic alliance with Henghe Group, joint production of petroleum resins and professional marketing operation, guarantee the quality, competitive price, timely and first class logistics. Brand of Yong Hua series of products have been accepted by customers all over the world.

分类产品:  
Product line

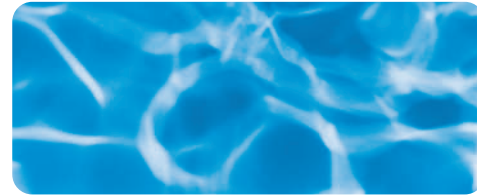
Petroleum Resin



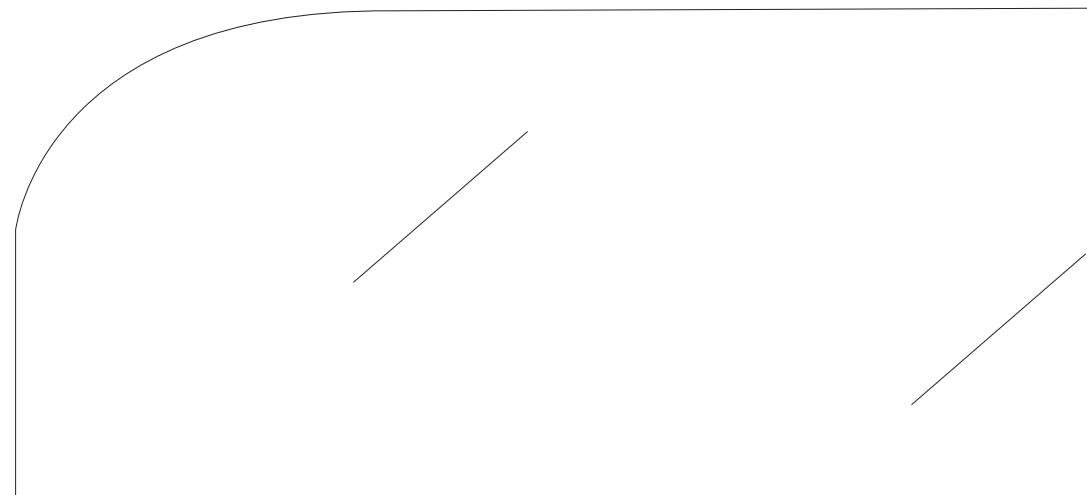
Polyamide Resin



Polyetone Resin  
Polyaldehyde Resin



Maleic Resin  
Vinyl Resin





## C5 Terpene modified hydrocarbon resin

### HD-1401

**HD-1401** is an excellent tackifying resin which has low color, odorless, high strength, good adhesion, good stability, this resin giving excellent compatibility with styrene polymerization (EVA, SIS, SBS).

Appearance	Transparent, Straw Yellow Solid Grain
Softening Point(Ring&Ball, °C)	115-123
Color(Molten Resin, Ga#)	≤6
Wax Cloud Point Eva/ 25/25/50 Resin/ 30/45/25 Wax/ 20/40/40	95
Insoluble In Benzene(%)	0.05
Recommend Applications	PSA, HMA

#### Feature of HD-1401 in solvent based pressure sensitive adhesives

- (1) Significantly increase peel adhesion and cohesion while maintaining tack properties
- (2) Good aging stability
- (3) Light color

#### Application

Solvent based pressure sensitive adhesives







## C5 Aromatic modified aliphatic hydrocarbon resin

### HD-2101

**HD-2101** is an aromatic modified aliphatic hydrocarbon resin giving excellent compatibility with natural and most synthetic rubbers and with EVA copolymers. It provides low viscosity, highly flexible plasticized blends having good adhesion to difficult surfaces.

Appearance	Transparent, Straw Yellow Solid Grain
Softening Point(Ring&Ball, °C)	89-97
Color(Molten Resin, Ga#)	≤11
Wax Cloud Point Eva/ 25/25/50 Resin/ 30/45/25 Wax/ 20/40/40	92
Insoluble In Benzene(%)	0.05
Recommend Applications	HMA, Tire Rubber

#### Features of HD-2101 in hot melt adhesives

- (1) Good open time/set time balance
- (2) Good adhesive ability
- (3) Excellent aging stability

#### Application

Hot melt adhesive tire&rubber





## C5 Hydrocarbon resin designated for type rubber mixing

### C5-HD123

**C5-HD123** is applicable to acyclic petroleum resin of rubber mixing which don't contain arene, which have good compatibility with synthetic rubber of various kinds, polyethylene, polypropylene, styrene polymer, EVA, etc, as well as reinforcing resin, in rubber mixing, it is applicable to adhesive, reinforcing agent, filler for its improvement in tensile strength, tensile stretch, anti-avulsion and the ideal auxiliary agent for high-grade soles, rubber products, inner tube, strap and light rubber products.

Appearance	Transparent, Straw Yellow Solid Grain
Softening Point(Ring&Ball, °C)	95-105
Color(Molten Resin, Ga#)	≤8
Ash Content(wt%)	≤0.08
Iodine Value(MgI <sub>2</sub> /100mg)	150±25
Acid Value(mgKOH/mg)	≤0.6
Insoluble In Benzene(%)	0.05
Recommend Applications	Tire Rubber Compounding

#### Features of C5-HD123 in rubber mixing

- (1) To have good initial viscosity and holding viscosity with enhanced raw acidity and reduced money viscosity, but will not affect sulfuration period and physical performance after sulfuration
- (2) To reduce the rigidity and modulus of sulfuration point, to enhance elongation and anti-stripping, and to help even the filler.
- (3) To improve rubber intensity and ageing resistance
- (4) To avoid adhesion to processing machines
- (5) To help even the filler
- (6) Light color

#### Application

Tyre rubber mixing other rubber products such as soles, heels, floor boards, belts, rubber hoses, inter tubers light rubber products





## C5 Hydrocarbon resin for hot melt pressure sensitive adhesive

### HD-1288,HD-2315,HD-1310

**HD-1288,HD-2315,HD-1310** are petroleum resins suitable for hot-melting additives, (including quick packaging adhesives, book blinding adhesives, wood adhesives and glue sticks, etc). they have excellent compatibility with SIS, SBS, EVA, natural rubber and many kinds of synthetic rubbers. They provide enhanced performance in hot melt adhesive applications.

	HD-1288	HD-2315	HD-1310
Appearance	Transparent, Straw Yellow Solid Grain		
Softening Point(Ring&Ball, °C)	96-104	89-96	91-97
Color(Molten Resin, Ga#)	≤6	≤5	≤6
Wax Cloud Point			
Eva/ 25/25/50		≤105	≤90
Resin/ 30/45/25			
Wax/ 20/40/40			
Acid Value(mgKOH/mg)	≤0.6		
Melt Viscosity(200°C, cps)		≤200	≤200
Insoluble In Benzene(%)	0.05	0.05	0.05
Recommend Applications	PSA, HMA	HMA	HMA

### Feature of HD-1288,HD-2315,HD-1310 in hot melt pressure sensitive adhesive

- (1) Good open time/set time balance
- (2) Good adhesive ability
- (3) Excellent aging stability
- (4) Light color

### Application

Hot melt pressure sensitive adhesive

Hot melt adhesive





## C5 Hydrocarbon resin for hot melt road marking

### HD-1288S

**HD-1288S** is a low molecular weight aliphatic hydrocarbon resin that has been designed for hot melt road marking systems. This resin shows outstanding affinity for pigments and superior processability in the hot melt road marking application. It will remain stable all round the year by adding additive.

Appearance	Transparent, Straw Yellow Solid Grain
Softening Point(Ring&Ball, °C)	98-105
Color(Molten Resin, Ga#)	≤5
Ash Content(wt%)	≤0.08
Color Stability(200°C, 3hrs, Ga#)	≤8
Acid Value(mgKOH/mg)	≥1.0
Melt Viscosity(200°C, cps)	≤250
Insoluble In Benzene(%)	0.05
Recommend Applications	HMRM

#### Features of hot melt road marking made from HD-1288S

- (1) Light color
- (2) Good fluidity
- (3) Good wearability
- (4) Speedy desiccation
- (5) Good thermal stability
- (6) Good in other performances such as even dispersion, no settlement, weather-proof mud resistance, adhesion

#### Application

Hot melt road marking





## C5 Hydrocarbon resin for solvent based pressure adhesive

### HD-1204,HD-1304

**HD-1204,HD-1304** are low molecular weight aliphatic petroleum resins that widely applicable to solvent based pressure sensitive adhesive labels and tapes. these grades have great compatibility with SIS, caoutchouc, synthetic rubber of various kinds, EVA as well as enhanced all kinds of performances in solvent based pressure sensitive adhesive applications.

	HD-1204	HD-1304
Appearance	Transparent, Straw Yellow Solid Grain	
Softening Point(Ring&Ball, °C)	96-104	96-104
Color(Molten Resin, Ga#)	≤6	≤6
Ash Content(wt%)	≤0.08	
Wax Cloud Point		
Eva/ 25/25/50	≤90	≤85
Resin/ 30/45/25		
Wax/ 20/40/40		
Melt Viscosity(200°C, cps)	≤200	≤200
Insoluble In Benzene(%)	0.05	0.05
Recommend Applications	PSA,HMA	

### Feature of HD-1204,HD-1304 in hot melt pressure sensitive adhesive

- (1) Develop high peel adhesion while maintaining tack and cohesion properties
- (2) Good aging stability due to tailored molecular weight distribution
- (3) Optimal balance between initial viscosity and cohesion proves the high shear strength and good aging-resistance.
- (4) Great cohesion and low temperature viscosity
- (5) To keep optimal balance between initial viscosity, cohesion and adhesive force and stable quality of products.
- (6) Light color

### Application

Solvent based pressure sensitive adhesive







## Light Color C9 Hydrocarbon Resin

### Brief introduction

**C9 petroleum resin** is a kind of thermal plasticizing resin produced by C9 fraction, by-products of petroleum cracking, through pretreatment, polymerization and distillation. It is not a high polymer with the molecular weight between 300-3000. Featured by acid value, easy mutual soluble, resistant to water, resistant to ethanol and chemicals. It has the chemical stabilizing property to acid and alkaline, viscosity adjusting and thermal stabilizing. Generally, the petroleum resins are used together with other kinds of resins as promoters, adjusting agent and modifiers.

### Technical specification

Item	Light color C9 Petroleum resin				
Softening Point (Ring & Ball, °C)	100	110	120	130	140
Color ,Ga.# (sample:methylbenzene=1:1)	4-7	4-7	4-7	4-7	4-7
Ash Content (wt%) Max	0.1	0.1	0.1	0.1	0.1
Iodine Value (mgI <sub>2</sub> /100mg)	Depend on customers needs				
Acid Value (mgKOH/mg) Max	0.5	0.5	0.5	0.5	0.5
Density (g/cm <sup>3</sup> ,20 °C)	1.06-1.09	1.06-1.09	1.06-1.09	1.06-1.09	1.06-1.09





## **Application**

### **A Paints**

Paints mainly use C9 petroleum resins with high softening point, petroleum resins are added to paints, increase the final finishes of paints, the adhesiveness of paint films and the hardness. Resistant to acid and alkaline.

### **B Rubbers**

Mainly use C9 petroleum resins with low softening point, these kinds of resins have very good mutual solubility with natural rubber particles, no affect to the sulphurization of rubber. Rubbers added with petroleum resins will increase the strength, adhesiveness and softening property.

### **C Adhesives**

Petroleum resins have very good adhesiveness, they can increase the adhesiveness of adhesives, resistance to acid, alkaline and water. Subsequently they will reduce the production cost.

### **D Printing inks**

Usually, the C9 petroleum resins with high softening point are used for printing inks, they have color spreading, fast dry and brightening effects and increase the printing property.

### **E Others**

Petroleum resins have certain unsaturation property and can be used as paper glutting agents, plastic modifiers, etc.





## C9 Hydrocarbon Resin Of Thermal Polymerization

### Brief introduction

This product is made by the ethylenes's by-product, through thermal polymerization. It's a kind of transparent granular solid with color from light yellow to brown. It has the properties of good solubility, water resistance, insulation and very good chemical stability over acid and alkali, it still has good adhesive strength and low heat conduction, etc.

### Technical specification

Item	HD-90	HD-100	HD-110	HD-120	HD-130
Softening Point (Ring & Ball, °C)	80-90	90-100	100-110	120-130	130-140
Color ,Ga.# (sample:methylbenzene=1:1)	8-12	8-12	8-12	8-12	8-12
Ash Content (wt%) Max	0.04	0.04	0.04	0.04	0.04
Bromine Value (mg/100mg)	Depend on customers needs				
Acid Value (mgKOH/mg) Max	0.6	0.6	0.6	10-16	0.6
Viscosity (m.pa.s, 25 °C)	350-800				
N-heptylalkane saturation 25 °C, ml	20				
Appearance	Granular solid with color from light yellow to brown				







## **Application**

### **A Paints**

Paints mainly use C9 petroleum resins with high softening point, petroleum resins are added to paints, increase the final finishes of paints, the adhesiveness of paint films and the hardness. Resistant to acid and alkaline.

### **B Rubbers**

This kind of resin has good inter solubility with natural rubber and little influence to vulcanization, make the rubber more adhesive, strength and soft; It is suitable for high quality rubber products such as radial tire.

### **C Adhesives**

It can be substitute for rosin to synthetic hot melt adhesive, increase the adhesiveness of adhesives, resistance to acid, alkaline and water. Subsequently reduce the production cost.

### **D Printing inks**

C9 petroleum resins of high softening point are used for printing inks, they have colorspreading, fast dry and brightening effects and increase the printing property.

### **E Others**

Suitable for other resins or plastics as modifiers.





## Tar resin

### Brief introduction

This product is made by C9 fraction, a by-product of ethylene, through thermal polymerization. It's dark brown flake solid. It has the properties of good solubility, mutual solubility, water resistance, insulation and very good chemical stability over acid and alkali, good adhesive strength and low heat conduction, etc.

### Technical specification

Item	HD-50	HD-60	HD-70	HD-80	HD-90	HD-100	HD-110
Softening Point (Ring & Ball, °C)	40-50	50-60	60-70	70-80	80-90	90-100	100-110
Color ,Ga.# (smethylbenzene=1:1)	Dark brown						
Ash Content (wt%) Max	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PH	6-8	6-8	6-8	6-8	6-8	6-8	6-8

### Application

This product is suitable for paint, printing ink, and rubber agent, etc.  
 Mainly used as bridging agent in ink, filmogen in dark paint, reinforce rubbers strength.

