



SYLVAROS[®] DR 731D

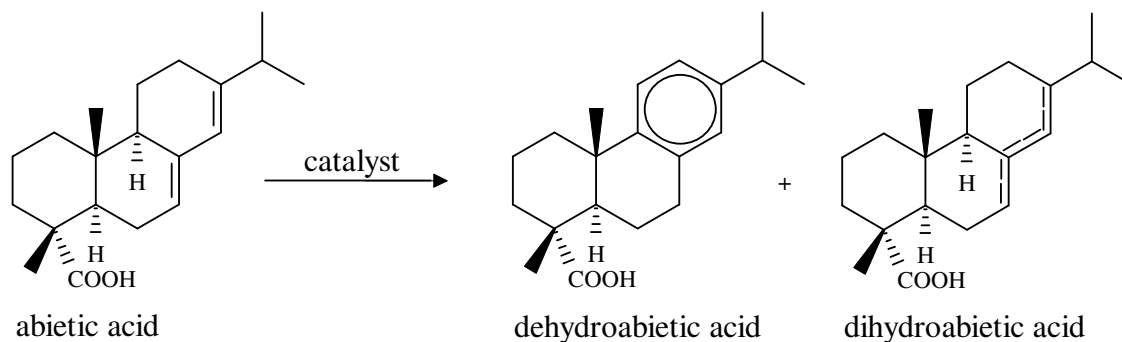
Produced in Gersthofen, Germany

Raw materials

Rosin is used in the manufacture of SYLVAROS[®] DR 731D. The rosin acid content is about 90 % (w/w). The proportions of the rosin acids of the abietic and pimaric acid groups vary according to the type of pinewood, the location and the method of treating the rosin. Beside free rosin acids the product contains neutral components and unsaponifiable matter.

Method

When disproportionated at elevated temperatures in the presence of a noble metal catalyst, the rosin acids with a conjugated double bond (abietic acid group) are converted to dehydroabietic acid with elimination of hydrogen. To a lesser extent a hydrogenation reaction also takes place, resulting in the formation of isomeric dihydroabietic acids.



The isomeric pimaric acids with isolated double bonds in rosin remain mostly unchanged under the reaction conditions.

Disproportionation reduces the high susceptibility of the rosins to oxidation and the associated deterioration in their colour.

Product properties

SYLVAROS[®] DR 731D is a pale, highly colour-stable resin. Its average oxygen absorption is less than 0.2 % (w/w) over a period of 4 weeks. The material may, however, deteriorate slightly in colour if stored for a prolonged period exposed to air. Molten rosin at higher temperatures should be blanketed with an inert gas to prevent any possibility of oxidation by atmospheric oxygen.

SYLVAROS[®] DR 731D is practically insoluble in water (<10 mg/l, 20°C), but has unlimited solubility in all common organic solvents.

In contrast to ABIETA[™] DR 835A, SYLVAROS[®] DR 731D is liable to German regulations on dangerous substances (GefStoffV).

SYLVAROS[®] DR 731D is listed in FDA approval § 178.3870.



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Product Data Sheet

Standard Delivery Specification (This version of the specification is valid today: June 27th, 2008)

<u>characteristic</u>	<u>unit</u>	<u>value</u>	<u>method</u>
Acid Number	mg KOH/g	150 - 170	ASTM D 803
Saponification Number	mg KOH/g	152 – 173	ASTM D 464
Colour	US-Rosin Grade	min. WG	ASTM D 509
Drop point	°C	min. 85	Ubbelohde
Dehydroabietic Acid	% (w/w)	min. 45	Arizona Chemical UV method
Abietic Acid	% (w/w)	not detectable	Arizona Chemical UV method
Iron	mg/kg	max. 10	ASTM D 1064
Iodine value	g/100 g	85 – 115	Kaufmann
Unsaponifiable matter	% (w/w)	max. 13	ASTM D 1065

Arizona Chemical laboratory test methods are available on request.

Application

SYLVAROS[®] DR 731D can be used for the manufacture of emulsifiers for the polymerization process and for pigment coating.

SYLVAROS[®] DR 731D is further suitable for the formulation of solvent based adhesives and hotmelts as well as in the manufacture of adhesives tapes, rubber products and care products.

Other applications are lacquers, sealants, paper sizing agents, marine coatings and the production of esters and other rosin derivatives.

Dispatch and Storage

SYLVAROS[®] DR 731D is normally supplied in pastilled form in PE-bags containing 25 kg net.

The material should be kept away from heat sources and radiant heat. The maximum storage temperature is 30 °C. At temperatures above 20 °C pallets should not be stored more than two high. Particularly during the summertime it is inevitable that the pastils will stick to each other. Tapping the bags normally restores the free-flowing properties which can also be improved by supplying in cartons. On request the product can also be supplied in 225 kg drums en bloc. Larger quantities can be supplied in heated road tankers or containers, loaded with a product temperature of at least 180°C. Since the rosins tend to crystallize at temperatures between 110°C and 140°C, the discharge temperature should be at least 160°C.

Shelf life

Under appropriate dry conditions the shelf life of SYLVAROS[®] DR 731D is at least 1 year. Thereafter, reapproving of the material by Arizona Chemical is recommended.



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