

Technical data sheet

Shellac

Version: 04/2018

Art.No.:

337503-01546 (Type 4621)	337503-01552 (Type 4503 hand made)
337503-01547 (Type 4624 DL)	337503-01553 (Type 4602)
337503-01548 (Type 4625 DO)	337503-01554 (Type 4505 TN)
337503-01551 (Type 7730) als Lösung	337503-01555 (Type 4504 Lemon 1 m.m.)

Shellac is the refined, hardened, resinous secretion of the lac insect known as *Laccifer Lacca* (Kerr). It has the distinction of being the only commercial resin of animal origin, thus being a true natural resin. According to its unique properties, Shellac is physiologically harmless and does not cause any environmental problems. So Shellac becomes more popular according to increasing environmental consciousness.

Shellac is manufactured by three different production methods

Group I:	Solvent process
Group II:	Heat process
Group III:	Bleach process

Technical Data:

Group I – Flakes, dewaxed
 CAS-Nr. 9000-59-3, EINECS: 232-549-9
 FDA-conformity: 175.105



	Type 4621	Type 4624 DL	Type 4625 DO
Colour number*	≤ 10	≤ 15	≤ 16
Wax content [%]	≤ 0,2	≤ 0,2	≤ 0,2
Insolubles in alcohol [%]	ca. 0,1	ca. 0,1	ca. 0,1
Melting point [°C]	65 – 85	65 – 85	65 – 85
Acid value [mg KOH/g]	65 – 80	65 – 80	65 – 80
Saponification number [mg KOH/g]	190 – 230	190 – 230	190 – 230
Loss in drying [%]	≤ 2	≤ 2	≤ 2
Heavy metals [ppm]	≤ 10	≤ 10	≤ 10

*Gardner, 20% in Ethanol

Group II – Flakes, wax containing
 CAS-Nr. 9000-59-3, EINECS: 232-549-9

	Type 4602	Type 4505 TN ^{a)}	Type 4504 ^{a)}	Type 4503 ^{b)}
Colour number*	≤ 16	≤ 18	≤ 18	≤ 16
Wax content [%]	≤ 4,5	≤ 4,5	≤ 4,5	≤ 5,5
Insolubles in alcohol [%]	≤ 1,0	≤ 1,5	≤ 1,0	≤ 1,0
Melting point [°C]	70 – 90	70 – 90	70 – 90	70 – 90
Acid value [mg KOH/g]	60 – 80	60 – 80	60 – 80	65 – 76
Saponification number [mg KOH/g]	185 – 200	185 – 200	185 – 220	185 – 200
Loss in drying [%]	≤ 2	≤ 2	≤ 2	≤ 2
Iodine number	12 – 18	12 – 18	12 – 18	12 – 18

*Gardner, 20% in Ethanol ^{a)} machine made ^{b)} hand made

Group III – white bleached, dewaxed, available as alkaline-aqueous and ethanol based solution
 CAS-Nr. 9000-59-3, EINECS: 232-549-9
 E-904, food additive according to european regulation 1333/2008
 purity criteria according to european regulation of specifications for food additives 231/2012

	Type 7730
Colour number*	≤ 8
Wax content [%]	≤ 0,2
Insolubles in alcohol [%]	≤ 0,2
Melting point [°C]	90 – 105
Acid value [mg KOH/g]	60 – 89
Lead [mg/kg]	ca. 2
Saponification number [mg KOH/g]	220 – 280
Loss in drying [%]	≤ 6
Rosin	nicht enthalten

*Gardner, 20% in Ethanol

Delivery form:

Flakes, powder and solution

Application and properties:

Shellac gives excellent adhesion, good gloss and has good compatibility with other resins. Shellac flakes offer good mechanical, thermal and electrical properties. With alcohol based solutions you can produce smooth, flexible and resistant films with excellent adhesion. Shellac is soluble in low alcohols and a number of other solvents. The solubility in water can be obtained by the addition of alkali and heat. Shellac is insoluble in glycol and glycerine, but dissolves in diethylene glycol. It is insoluble in aliphatic and aromatic hydrocarbon resins and their halogen derivates, carbon tetrachloride and carbon disulphide. Shellac is compatible with a number of polar natural and synthetic resins and with nitrocellulose.

Alcohol based solutions of Shellac are used in wood varnishes, especially such as 'French Polish', industrial and paper lacquers, printing inks, leather finishes, sealers, in electrical industry for hat proofing, adhesives and cements and for dental moulds. Shellac flakes find their application in grinding wheels, insulators and sealing-waxes and further in protective coatings in the pharmaceutical and food industries.

Packaging:

Paper bag 25kg, drum 180kg

Recommended storage conditions:

Shellac should be stored in original packaging in a dry, cool and well ventilated room at temperatures of max. 15°C and protected from heat and direct sun.