

ENCOR[®] 4550

ADHESIVES / PSA

ARKEMA COATING RESINS

Product Application details

ENCOR[®] 4550 is an acrylic latex, free from solvents, plasticizers and APE surfactants. ENCOR[®] 4550 is mainly used in the manufacture of polyisocyanate or polyaziridine crosslinked PSA materials, characterised by very low adhesion, high cohesion and good anchorage on Corona treated polyolefines. This product is ideally suited for the production of removable PSA articles and protective films for metal, glass and plastic surfaces.

Performance Benefits

- Extremely soft
- Ultra-removable

Polymer Type

- Acrylic Copolymer

Sales Specifications

Solid Content at 105°C, % (ISO 3251)	49 - 51
pH (ISO 976)	4.0 - 6.0
Viscosity at 23°C, mPa.s (Brookfield RVT, 100rpm) (ISO 2555)	20 - 150

Other Characteristics¹

Stabilizing system	A / NI
Tg (DSC), °C	- 51
Density / Specific Gravity at 23°C, g/ml (ISO 2811)	1.03
Average Particle size, nm (ISO 13321)	350
Liquid Surface Tension (mN/m)	33

¹ The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

Typical Adhesive Properties¹

180° Peel after 24h on SS, N/25mm (FTM 1)	0.5 – 1.5
Loop tack on SS, N (FTM 9)	2.5 – 3.5
Shear adhesion from SS, h (FTM 8 / 2kg, 1in ²)	> 50

Test settings: Backing: PET 50 µm ; Coating weight: 20g/m² ; SS: Stainless Steel

Formulation Guidelines

The addition of water compatible polyisocyanate (about 0.5-2.0%) should preferably be done after having adjusted the pH of ENCOR[®] 4550 at around 7.0. The addition of water compatible polyaziridine (about 0.3-1.0%) must be done after having adjusted the pH of ENCOR[®] 4550 at around 8.5-9.0. The use of ammonia is recommended. The mixture has then a pot-life of several hours, depending on blend proportions and temperature.

TYPICAL ADHESIVE PROPERTIES AFTER CROSSLINKING

180° Peel after 24h on Glass, N/25mm (FTM 1)	0.1 - 0.4
180° Peel after 30d on Glass, N/25mm (FTM 1)	0.3 - 0.6
180° Peel after 14d at 50°C on Glass, N/25mm (FTM 1)	0.2 - 0.6
Transfer test to SS at 80°C (Internal Method)	Pass

Test settings: Backing: PE 38 µm; Coating weight: 10g/m²; SS: Stainless Steel: After crosslinking with 0.7% of XAMA[®] 7

The product does not contain any defoamer. According to the involved coating system and the final application, addition of specific defoamers can be required. Compatibility has then to be carefully checked in advance. In the case of poor wetting it is suggested to decrease the surface tension with the addition of suitable wetting agents such as dioctyl sulfosuccinates.

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

ENCOR® 4550 should be stored indoors in the original, unopened and undamaged container, in a dry place at storage temperatures between 5°C and 30°C. Exposure to direct sunlight should be avoided.

The product is protected to prevent any microbial deterioration during normal conditions of storage but care should be taken to avoid accidental contamination during subsequent handling and processing.

In the above mentioned storage conditions the shelf life of the resin will be 6 months from the shipping date

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Arkema expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

Arkema has implemented a Medical Policy regarding the use of Arkema products in medical devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated medical grades to be used for such medical device applications. Products that have not been designated as medical grades are not authorized by Arkema for use in medical device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in medical device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies). It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

Arkema Coating Resins

420, rue d'Estienne d'Orves

92705 Colombes Cedex - France

arkema.com - arkemacoatingresins.com

