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 Characteristics[1]

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 Properties[1]

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, 1in²)	> 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: Aftrer 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

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