ENCOR® 4552

ADHESIVES

ARKEMA COATING RESINS

Product Application details

ENCOR® 4552 is a high solids acrylic latex which dries into a film showing pressure sensitive properties. This product is stabilised with APE-free surfactants and is free from solvents and plasticizers.
ENCOR® 4552 has been designed for the production of permanent PSA materials.
After crosslinking with water compatible polyisocyanates or polyaziridines, ENCOR® 4552 is very well suited for the manufacture of removable / protective films. The crosslinking ratio determines the residual adhesion level as well as the cohesive strength.

Performance Benefits

- High solids with low viscosity
- High tack and cohesion
- Good response to tackifiers

Polymer Type

- Acrylic Copolymer

Sales Specifications

Solid Content at 105°C, % (ISO 3251)	67 - 69
pH (ISO 976)	4.0 - 5.0
Viscosity at 23°C, mPa.s (Brookfield RVT , 20rpm) (ISO 2555)	400 - 1200

Other Characteristics[1]

Stabilizing system	A
Tg (DSC), °C	- 41
Density / Specific Gravity at 23°C, g/ml (ISO 2811)	1.02
Average Particle size, nm (ISO 13321)	310
Liquid Surface Tension (mN/m)	31

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)	13 - 17
Loop tack on SS, N (FTM 9)	10 - 12
Shear adhesion from SS, h (FTM 8 / 1kg, 1in²)	> 100

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® 4552 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® 4552 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 SS, N/25mm (FTM 1)	3.5 - 5.0
Loop tack on SS, N (FTM 9)	1.5 - 3.5
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
According to the involved coating system and the final application, addition of specific defoamers can be required. Compatibility and dosage have 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® 4552 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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