

PLEXTOL DV 455 is an aqueous emulsion of a self-crosslinking acrylic polymer.

For further information regarding this product please refer to:

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Property	Typical Value	Unit	Method ¹
Solids Content	55.0	%	EN ISO 3251
pH Value	2.5		DIN ISO 976
Viscosity	< 500	mPa s	ISO 1652
Glass Transition Temperature	16	°C	DIN 53765
Mean Particle Size	0.32	µm	
Tensile Strength	6	N/mm ²	DIN EN ISO 527
Elongation at Break	240	%	DIN EN ISO 527
Minimum Film-Forming Temperature	4	°C	DIN ISO 2115
Density	1,06	g/cm ³	DIN 51757

¹ internal method based upon the specified norm

Application Advice

Film properties Evaporation of the water above the minimum film-forming temperature leaves a clear, colourless film. In order to obtain complete crosslinkage, additional heat treatment is required. We recommend 5 min at 140 °C for a film on which physical or chemical tests are to be performed. The crosslinked film is soft, only slightly extensible and tack-free at room temperature. It is insoluble in water and resistant to many acids and alkalis. It is virtually insoluble in organic solvents. Particularly noteworthy is its good lightfastness and resistance to weathering and ageing. Instruction for use - PLEXTOL DV 455 can be diluted with water to provide spraying and impregnating liquors of any desired concentration. - These liquors can be foamed by mixing in air. For impregnation by means of foam, we recommend the addition of Marlupal 013/109 (approx. 2 g/l) as a foaming agent and ROHAGIT SD 25 (approx. 10 g/l) as a foam stabiliser. For coatings on a foam base, we suggest ammonium stearate as a foaming agent. - PLEXTOL DV 455 can be thickened by means of thickener emulsions (e. g. RHOAGIT SD 15), thickener solutions (e. g. ROHAGIT SD 25) and cellulose or starch derivatives to provide printing, nip-padding and coating compounds. - The drying process must guarantee adequate crosslinkage of the polymer, i. e. after evaporation of the water, the material must reach a temperature between 130 and 160 °C for a short period. - The crosslinkage reaction is catalysed by acid and can be accelerated by adding phosphoric acid or p-toluene sulphonic acid (approx. 10 g/l of a 10 % solution on emulsion). - By mixing PLEXTOL DV 455 with other emulsions from the PLEXTOL range, the film properties of the foamer can be influenced within wide limits and thus adapted to the intended application. Applications - Bonding of fibrefills for the upholstery, clothing and bedding industry. - Boilproof and dry-cleanable finishing, coating and lamination of textiles and non-wovens.

Shipping and Storage

This product is supplied in road tankers or in non-returnable plastic drums secured by a lid with clamping ring or in non-returnable palletized bulk containers (net volume 1.000 lt). The product must be protected from frost and exposure to direct sunlight. Storage temperatures between +5 °C and +30 °C are recommended. The product contains in-can preservation to protect it against microbiological attack during transportation. For protection against microbiological contamination during storage stringent plant hygiene is essential. Depending on the storage conditions addition of suitable preservatives may be necessary. Care must be taken that drums and containers are properly closed. During storage, shipping and handling contact with metal surfaces that are not corrosion protected must be avoided. When stored properly, the product has a shelf life of 12 months from the date of delivery.

Product Safety

Before handling, please read the Safety Data Sheet of this product for advice on safety, use and disposal.