

TECHNICAL DATA SHEET

Date of issue : 15/06/04
 Date last review : 15/10/07
 Edition N° : 3
 Page : 1 di 3

POLURENE FP80 A / FP75

<p>Type of polymer:</p>	<p>Two-component polyurethane adhesive system containing solvents. The system is composed by :</p> <p style="text-align: center;">Prepolymer : POLURENE FP 80 A (100 parts) Curing agent : POLURENE FP 75 (30 parts)</p>	
<p>Range of use:</p>	<p>The adhesive when mixed with hardener FP 75 it exhibits excellent bond strength excellent chemical and thermal resistance and good wettability with variety of film/film, film/foil and metallized laminates.</p>	
<p>Polymer Specifications:</p> <p>(°) DATA SHOWN ON ANALYSIS CERTIFICATE</p>	<p style="text-align: center;">POLURENE FP 80 A</p> <p>Appearance Colour (Gardner 1953) Solids (%) Viscosity (23 °C mPa*s) Solvent</p>	<p>OH terminated °</p> <p>Clear 3 MAX ° 60 +/- 1. ° 700 / 1500 ° Ethyl Acetate</p>
<p>Catalyst specifications:</p> <p>(°) DATA SHOWN ON ANALYSIS CERTIFICATE</p>	<p style="text-align: center;">POLURENE FP 75</p> <p>Appearance Colour (Gardner) Solids (%) Viscosity (23°C mPa*s) Density at 20 °C g/ml Solvent Free TDI monomer %</p>	<p>NCO terminated °</p> <p>Clear 1 MAX ° 75 +/- 2 ° 2100 +/- 900. ° 1,2 +/- 0,05 g/ml Ethyl Acetate < 0,5 °</p>
<p>Legislation:</p>	<p>The monomers used for the production of POLURENE adhesive systems, are in accordance to the following legislation :</p> <ul style="list-style-type: none"> • Directive 90/128/CEE 23/02/1990 relating to plastic materials and articles intended to come into contact with foodstuffs, directive 2002/72 – 2004/19 – 2007/19. And updates. • CFR, TITLE 21, §175.105 FDA Washington D.C.. And updates • BfR XXVIII. Vernetzte Polyurethane als Klebeschichten für Lebensmittelverpackungsmaterialien. Stand vom 01.06.1981; and updates. 	

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 Page : 2 di 3

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<p>Product properties:</p>	<p>POLURENE FP 80 A is an urethanized and hydroxyl terminated polyester. POLURENE FP 80 A shows good bond strength and it is excellent to production of high performance triplex laminates. It is suitable for mixing with other hydroxyl terminated and polyester based polymers. POLURENE FP 80 A after curing, results in a dry and transparent film with high resistance to aging and good elasticity.</p>
<p>Application condition:</p>	<p><u>Application system</u> ; the adhesive can be applied with all dry laminating units for solvent based adhesive (smooth or gravure rolls).</p> <p><u>Application weight</u> ; The adhesive weight may range from 2 - 4 g/m2 dry. Transparent laminates exposed to heater deep drawing may require higher weights. For printed films the application weight has to be adjusted accordingly and it should be approx. 1 gm higher than for unprinted films. Highest possible laminating temperatures together with high line pressure of the calander improve bond strength and optical appearance of the laminates.</p> <p><u>Mixing ratio</u> ; 100 parts of FP 80 A and 30 parts of FP 75 Catalyst is supplied in single dose.</p> <p><u>Dilution</u>; Suitable solvents are urethane grade ethyl acetate and methylethyl Ketone</p> <p><u>System preparation</u> ; POLURENE FP 80 A has to be diluted down to the solids concentration requested by mixing it with the corresponding solvent. The hardener POLURENE FP 75 has to be added consequently to the diluted POLURENE FP 80 solution. The optimal mix ratio is the following : 25 Kg of FP 80 A + 26 Kg of solvent + 7,5 Kg of FP 75.</p>
<p>Pot life:</p>	<p>The ready-to-use adhesive POLURENE FP 80A/ FP75 in closed containers has a working time of about 24 hours.</p>
<p>Curing:</p>	<p>Curing begins during lamination and continues slowly at room temperature. Complete curing will be achieved after about 7 days of storage at room temperature (depending upon the laminate structure, environmental and coupling conditions). Storage of trials at low temperature and high humidity is not guaranteed.</p>

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 Page : 3 di 3

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Storage:	<p>The products are supplied in pails and drums and have a warranty of 6 months for the NCO terminated product and of 12 months for OH terminated product, when stored in the original unopened containers.</p> <p>Open containers have to be closed immediately and the material should be consumed within a short period.</p> <p>Keep containers tightly closed and in a well ventilated place.</p> <p>Keep away from sources of ignition, heat and direct sunlight.</p>
Waste classification:	<p>In accordance with the local legislation the adhesive system POLURENE FP 80A / FP75 cross-linked and cured, can be classified as special waste.</p> <p>In case of dilution with Ethyl acetate don't change the polymer classification.</p>
Additional information:	<p>Films, additives, contained in such films (antistatic, slip agents etc.) printing inks, preliminary treatment proceedings, operative conditions of rolling and manufacture products are all factors which may influence, even after some time, the properties of adhesion and endurance of the rolled products.</p> <p>In order to achieve the best results in relation to the final properties of the products, the specific features of each component used in the production of the package must be considered.</p> <p><u>Adhesive technical assistance (ATA) service of SAPICI</u> is available for providing you with all the assistance and information you might need for the correct use of our adhesive system.</p>

Dilution table

Dry %	30	35	40
POLURENE FP 80 A	100	100	100
POLURENE FP 75	30	30	30
Solvent	145	105	75
Viscosity 25°C. Ford Cup n° 4	13 sec.	14 sec.	15 sec.

SAPICI S.p.A. warrants that the properties of the product POLURENE FP are exact, in compliance with all statutory requirements and exclusively derive from its own knowledge and experience. SAPICI S.p.A. also warrants that, when used in accordance with the instructions provided and standard conditions of use, the product POLURENE FP is free from defects. There are no other warranties, expressed or implied. Considering the existence of different materials and the fact that the conditions of application cannot be under our control, the user must verify the suitability of the product for the intended use, through adequate tests, so the user undertakes all responsibilities of the final packaging. The user of the product POLURENE FP accepts all risks and liability related to inappropriate use of the product. Stating that POLURENE FP are not suitable for direct food contact, the producer of the final article has the duty to prove the absence of migration from indirect food contact.