

Tie resins for copolyester multilayer film applications

Several things must be considered when selecting tie resins that will be used in packaging applications, such as:

- **Regulatory requirements**—Does the packaging application require FDA/EU food contact compatibility? Check with your tie resin supplier on approved grades.
- **Adhesion**—What materials does the tie resin need to adhere to? While a tie resin may bond well to one resin, it may not bond well to others.
- **Processability**—To avoid processing phenomena such as chevrons or flow instabilities, consider the flow characteristics of the molten polymer, including:
 - Melt flow rate
 - Rheology—Match rheology curves as closely as possible. Severe mismatches result in flow instability between layers.
 - Viscoelastic behavior—Ensure optimized adhesion by using coextrusion models on all components or through experimentation.

Suggested tie resins for Eastman copolyesters

ADMER™ adhesive resin Mitsui Chemicals www.mitsuichemicals.com/adm.htm	Mitsui Chemicals Europe GmbH Oststrasse 34 40211 Duesseldorf, Germany marketing@mcie.de +49 211 171 9960
	Mitsui Chemicals America, Inc. 800 Westchester Ave. Suite S306 Rye Brook, NY 10573, U.S.A. +1 914-253-0790
BYNEL™ adhesive resin Dow Chemical www.dow.com/en-us/product-search/byneladhesiveresin	2040 Dow Ctr Midland, MI 48674, U.S.A. +1 989-636-1000

Note: Contact the tie resin supplier for suggested grades and fitness-for-use requirements.

Suggested tie resins for copolyesters adhered to various layers

Copolyesters to PA/EVOH	ADMER™ AT1955E—maleated PO elastomer ^{a,b}
	ADMER™ AT2614E—advanced-grade high MFI ^{a,c}
	BYNEL™ 21E787—maleated modified EMA ^a
Copolyesters to PO	ADMER™ NF911E—maleated LLDPE ^d
	ADMER™ SF730E—grade for double/triple bubble applications
	BYNEL™ 22E789, 22E780—maleated modified EMA

Note: Selecting versions of these tie resins with higher or lower molecular weight, viscosity, melt flow rate, or modification may be required. Contact the tie resin supplier for specific recommendations.

^aAlso offers PO (polyethylene and polypropylene polymers and copolymers) adhesion

^bOffers good adhesion, especially to Eastman copolyester GP001

^cOffers good adhesion, especially to Eastman Tritan™ FX200 copolyester

^dOffers good adhesion, especially to Eastman Eastobond™ copolyester



Eastman Corporate Headquarters

P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other Locations, +(1) 423-229-2000

www.eastman.com/locations

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