

Monsanto

FROM (NAME & LOCATION) C. D. Bias - St. Louis Organic Research

DATE	June 5, 1969	CC:	M. W. Farrar	Res. 1
			J. R. Darby	Res. 1
SUBJECT	United Resins		W. F. Waychoff	WWAYC
	Amorphous Polypropylene		J. K. Lilly	JLILL
REFERENCE	Work Request 69-20		C. P. Farley/P. R. Graham	CFAI
			W. E. Schalk	WSCHA
TO	Cumming Paton		J. A. Cannon	Res. 3
	CPATO		A. W. M. Coaker	Res. 3
			R. H. Mills	Res. 3
			N. W. Touchette	Res. 3

We have checked the compatibility of Montars 1, 5 and 9 in Eastman's amorphous polypropylene. Montar 5 appears to be immiscible in the P.P. at the three concentrations we tried: 10, 20 and 50%. Montar 1 seems to be somewhat miscible; we got fairly decent films with 10 and 20% Montar 1, but there appears to be discrete particles of Montar 1 which did not go into solution. Montar 9 is more miscible with the Eastman P.P. than Montar 1, but not at the 50% level, which was clearly immiscible.

A simple adhesion test was used to rate the adhesives. We coated a piece of kraft paper with the hot melt, rolled on another piece of kraft paper, and, after several minutes pulled the paper apart. Eastman P.P. alone gave only light sticking, little pressure to pull apart and about 20% paper tear. With 10% Montar 1, sticking was better, more pressure required for tearing, and more tearing (about 35% paper tear). 20% Montar 1 was much better, 100% paper tear. Montar 9, at both 10 and 20% was inferior to P.P. per se.

We cut dumbbells from the films and ran tensile properties on the Instron. All samples were very weak, tensile measurements being so low that the values are really meaningless.

Overall, I would say that the outlook for Montars in Eastman's polypropylene does not look very promising, unless some compatibilizing additional component can be found.

Chuck
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*Attach
to new D.R.*

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