

Supporting Information

Monitoring the Structure -Reactivity Relationship on Epoxidized Perilla and Safflower Oils

Thermosetting Resins

Thi-Nguyet TRAN,^a Chiara Di MAURO,^a Alain GRAILLOT,^b Alice MIJA^{a*}

^aUniversité Côte d'Azur, Institut de Chimie de Nice, UMR CNRS 7272, 28 Avenue Valrose, 06108 Nice Cedex 2, France.

E-mail : Alice.MIJA@univ-cotedazur.fr

^bSpecific Polymers, Parc Via Domitia, 150 Avenue des Cocardières, 34160, Castries, France.

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Table 1. FT-IR spectral peak assignments for starting comonomers.

Monomers	Group	Absorption peak (cm ⁻¹)
EVO	Methylene (-CH ₂ -)	2927, 2849
	Triglyceride carbonyl of ester (C=O)	1740
	Ether C-O-C, C-C-O	1300-1000
	Oxirane ring	3050, 847-823
DCAs	Hydroxyl (-O-H) of carboxylic acid	3200-2300; 900
	Carbonyl of acid (C=O)	1674-1676
	Cyclic benzene (C=C, C-C)	1586, 1560, 736
	C-O-C, C-C-O	1300-1000

Table 2. FT-IR assignments of imidazole initiator.

Wavenumber/ cm-1	Attribution
3256-2041	N-H stretching ; C-H stretching
1667	C=N stretching
1578	C-C stretching
1496, 1479,1447, 1325	C-N stretching
1261	C-H in-plane-bending
12	N-H in plane-bending
1147, 1100	C-H in-plane-bending
1055, 935	C-H out-of-plane-bending
894	Ring deformation in-plane-bending
840	N-H out of plane-bending
827	Ring deformation in-plane-bending
751	C-H out-of-plane-bending
655, 619	Ring deformation out-of-plane-bending

Table 3. Specifications of three epoxidized vegetable oils.

	EVO	EPLO	ESFO	ELO
Mn (g/mol)		1227	960	980
Epoxy content (meq/mol)		8.0	3.7	5.5