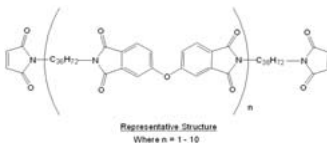
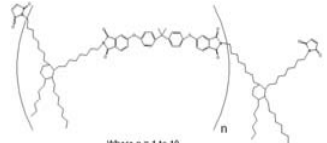
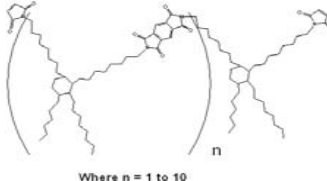
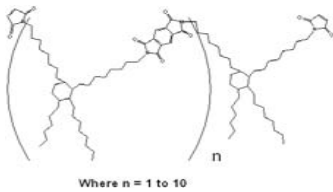
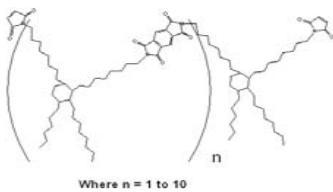
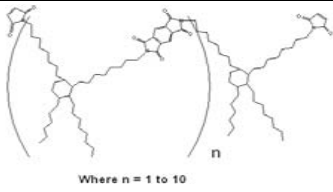
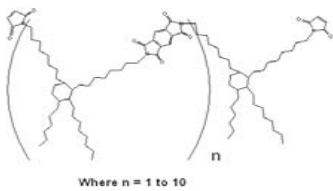
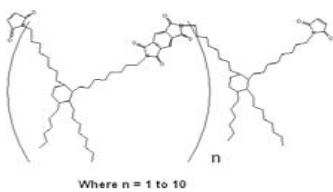
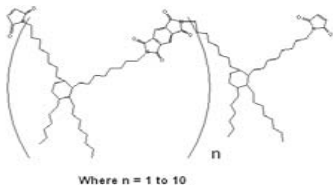
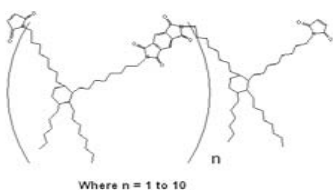
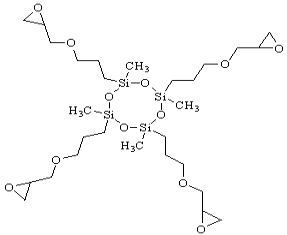
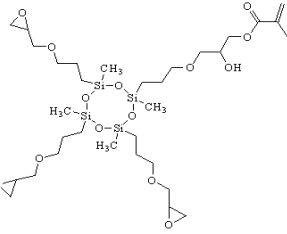
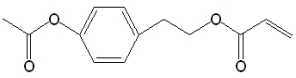
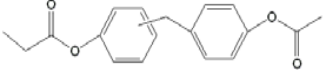
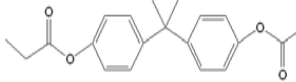
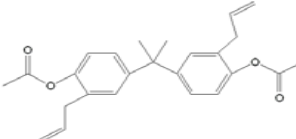
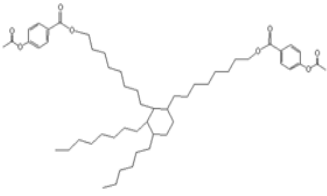



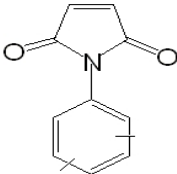
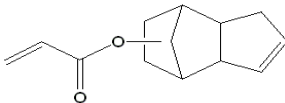
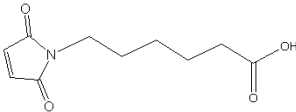
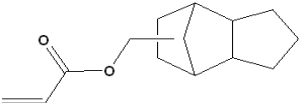
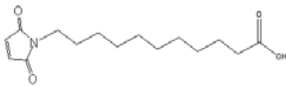
PRODUCT SELECTOR GUIDE

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS	
FUNCTIONAL ADDITIVES									
						Room Temp	cP		
A6165	A-6165 Soluble Pd Itaconate (SPdI)	1151654-51-1 (Y)	A soluble additive that on addition to a conductive adhesive formulation can significantly decrease the volume resistivity of the cured material.	Unavailable	<ul style="list-style-type: none"> Improves electrical conductivity in metal filled conductive paste formulations. Soluble in most resin systems. May improve the thermal conductivity in some formulations. 	Dark Brown Viscous Liquid	--	Increase electrical conductivity of resin system	
IMIDE-EXTENDED BISMALIMIDES									
						Room Temp	cP		
R1203	BMI-1500 (Liquid)	1290041-56-3 In Process	An amorphous, low molecular weight bismaleimide oligomer that exhibits good adhesion to a variety of substrates.		<ul style="list-style-type: none"> Soluble in many reactive diluents Hydrophobic Superior thermal stability High adhesion to various substrates 	Amber, Viscous Liquid	20,000 ± 10,000 (60deg C)	<ul style="list-style-type: none"> Film adhesives Pre-applied adhesives Adhesion to metal 	
R1191	BMI-1700 (Liquid)	1224691-98-8 (Y)	An amorphous, low molecular weight bismaleimide oligomer that exhibits good adhesion to a variety of substrates.		<ul style="list-style-type: none"> Soluble in many reactive diluents Hydrophobic Superior thermal stability High adhesion to various substrates 	Amber, High Viscosity Liquid	30,000 ± 10,000 (60deg C)	<ul style="list-style-type: none"> Film adhesives Pre-applied adhesives Adhesion to metal 	
R1130	BMI-3000 (Powder)	921213-77-6 (Y)	Bismaleimide oligomer that exhibits excellent flexibility and, on cure, forms very tough, hydrophobic polyimides.		<ul style="list-style-type: none"> Toughener Hydrophobic High adhesion* Superior thermal stability 	Light Yellow Powder	N/A	<ul style="list-style-type: none"> Film adhesives Pre-applied adhesives Adhesion to metal 	

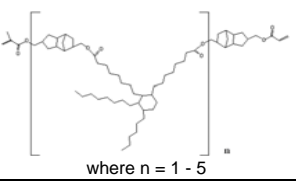
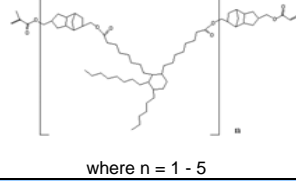
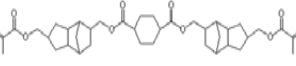
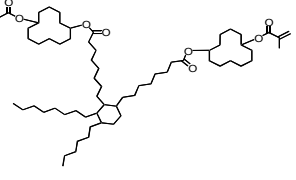
P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
R1177	BMI-3000 (50% Toluene)	921213-77-6 (Y)	Bismaleimide oligomer that exhibits excellent flexibility and, on cure, forms very tough, hydrophobic polyimides.	 Where n = 1 to 10	<ul style="list-style-type: none"> ·Toughener ·Hydrophobic ·High adhesion* ·Superior thermal stability 	Dark Brown Liquid	200	<ul style="list-style-type: none"> ·Film adhesives ·Pre-applied adhesives ·Adhesion to metal
R1090	BMI-3000 (Gel)	921213-77-6 (Y)	Bismaleimide oligomer that exhibits excellent flexibility and, on cure, forms very tough, hydrophobic polyimides.	 Where n = 1 to 10	<ul style="list-style-type: none"> ·Toughener ·Hydrophobic ·High adhesion* ·Superior thermal stability 	Red-Amber Gel	N/A	<ul style="list-style-type: none"> ·Film adhesives ·Pre-applied adhesives ·Adhesion to metal
R1193	BMI-4500 Polyamide-imide oligomer	1242162-29-3 (Y)	A medium molecular weight maleimide terminated polyamide-oligomer with a low melting point.	Available upon request	<ul style="list-style-type: none"> ·Very hydrophobic ·Good thermal stability ·Good adhesion* ·Good film properties 	Brown Powder	N/A	<ul style="list-style-type: none"> ·Film adhesives ·Pre-applied adhesives ·Adhesion to metal
R1171-P	BMI-5000 (Powder)	921213-77-6 (Y)	An imide-extended bismaleimide oligomer that exhibits excellent toughness in the cured state with intermediate cross-link density.	 Where n = 1 to 10	<ul style="list-style-type: none"> ·Low cross-link density ·Non-tacky ·Film-forming ·Maleimide functional oligomer ·Cures to a tough thermoset ·Additive to enhance toughness in thermoset compositions 	Light Yellow Powder	N/A	<ul style="list-style-type: none"> ·Film adhesives ·Thermally resistant adhesives
R1171-T	BMI-5000 (50% Toluene)	921213-77-6 (Y)	An imide-extended bismaleimide oligomer that exhibits excellent toughness in the cured state with an intermediate cross-link density.	 Where n = 1 to 10	<ul style="list-style-type: none"> ·Low cross-link density ·Non-tacky ·Film-forming ·Maleimide functional oligomer ·Cures to a tough thermoset ·Additive to enhance toughness in thermoset compositions 	Dark Brown Liquid	1,000	<ul style="list-style-type: none"> ·Film adhesives ·Thermally resistant adhesives

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
R1171-G	BMI-5000 (Gel)	921213-77-6 (Y)	An imide-extended bismaleimide oligomer that exhibits excellent toughness in the cured stated with an intermediate cross-link density.		<ul style="list-style-type: none"> -Low cross-link density -Non-tacky -Film-forming -Maleimide functional oligomer -Cures to a tough thermoset -Additive to enhance toughness in thermoset compositions 	Red-Amber Gel	N/A	<ul style="list-style-type: none"> -Film adhesives -Thermally resistant adhesives
R1176-P	BMI-9000 (Powder)	921213-77-6 (Y)	An imide-extended bismaleimide oligomer that exhibits excellent toughness in the cured stated with a relatively low cross-link density.		<ul style="list-style-type: none"> -Low cross-link density -Non-tacky -Film-forming -Maleimide functional oligomer -Cures to a tough thermoset -Additive to enhance toughness in thermoset compositions 	Light Yellow Powder	N/A	<ul style="list-style-type: none"> -Film adhesives -Thermally resistant adhesives
R1176-T	BMI-9000 (50% Toluene)	921213-77-6 (Y)	An imide-extended bismaleimide oligomer that exhibits excellent toughness in the cured stated with a relatively low cross-link density.		<ul style="list-style-type: none"> -Low cross-link density -Non-tacky -Film-forming -Maleimide functional oligomer -Cures to a tough thermoset -Additive to enhance toughness in thermoset compositions 	Dark Brown Liquid	500	<ul style="list-style-type: none"> -Film adhesives -Thermally resistant adhesives
CYCLOSILOXANE EPOXY HYBRIDS						Room Temp	cP	
R1163	CS-697 Polyglycidyl Ether Cyclosiloxane Monomer	257284-60-9 (Y)	A polyglycidyl ether cyclosiloxane monomer. NOT AVAILABLE IN JAPAN		<ul style="list-style-type: none"> -Multifunctional -UV curable -Low chloride -Low viscosity -Colorless 	Colorless Liquid	200	-UV curable additive
R1116	CS-783 Methacrylate Epoxy Cyclosiloxane	921214-21-3 (Y)	A methacrylate epoxy functional hybrid cyclosiloxane monomer.		<ul style="list-style-type: none"> -Dual cure mechanism -Multifunctional -UV curable -Low chloride -Low viscosity 	Yellow Liquid	250	<ul style="list-style-type: none"> -Hybrid cures -UV cures -B-Stageable adhesives

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
PHENYL ESTER EPOXY CURATIVES							Room Temp	cP
R1146	EC-234 Phenyl Ester Epoxy Curative Hybrid	926305-16-0 (Y-LVE)	A phenyl ester epoxy curative hybrid.		<ul style="list-style-type: none"> Hybrid cure Low viscosity 	Light Yellow Liquid	40	<ul style="list-style-type: none"> UV Adhesives B-stageable adhesives
R1170	EC-298 Bisphenol F Acetate Propionate	1044794-71-7 (Y-LVE)	A difunctional phenyl ester epoxy curative.		<ul style="list-style-type: none"> Stable Low viscosity Does not impede free radical cure 	Light Yellow Liquid	500	<ul style="list-style-type: none"> Thermoset adhesives Curative for epoxy/(meth) acrylate hybrids Hybrid epoxy/free radical thermosets
R1147	EC-326 Bisphenol A Acetate Propionate	N/A (Y-LVE)	A bisphenol A based acetate/propionate epoxy curative.		<ul style="list-style-type: none"> Hydrolytically resistant Low melting point Thermal stability Hydrophobic Toughener Does not impede free radical cure 	White/Yellow Solid	2,000***	<ul style="list-style-type: none"> Film adhesives Pre-applied adhesives
R1148	EC-392 Phenyl Ester Epoxy Curative Hybrid of Bisphenol A	1071466-61-9 (Y)	A phenyl ester epoxy curative hybrid of bisphenol A.		<ul style="list-style-type: none"> Dual cure mechanism High cross-link density Multifunctional Thermal stability 	Amber Liquid	2,500	<ul style="list-style-type: none"> B-stageable adhesives Epoxy and BMI co-curative
R1165	EC-861 X-Acetate	1071523-12-0 (Y)	A phenyl acetate epoxy curative.		<ul style="list-style-type: none"> Low modulus Toughener Hydrolytically resistant thermosets Hydrophobic Thermal stability Does not impede free radical cure 	Amber/Yellow Liquid	2,500	<ul style="list-style-type: none"> Low stress epoxy thermosets
R1149	EC-1074 X-Tetra-phenol	926657-64-9 (Y)	A tetra-phenol epoxy curative derived from dimerdiol.		<ul style="list-style-type: none"> Low modulus Toughener Hydrolytically resistant thermosets Hydrophobic Thermal stability 	Amber Glassy Solid	N/A	<ul style="list-style-type: none"> Film adhesives Pre-applied adhesive compositions

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
LATENT EPOXY CATALYSTS						Room Temp	cP	
R1198	ECAT-243 Imidazole Epoxy Catalyst	1253404-90-8 (Y)	An imidazole epoxy catalyst that demonstrates good latency.	Unavailable	<ul style="list-style-type: none"> Good solubility in most epoxy monomers. Excellent latency characteristics 	Yellow Crystalline Solid	N/A	<ul style="list-style-type: none"> Electronic mold compounds Underfills
MONOFUNCTIONAL MONOMERS						Room Temp	cP	
R1151	MM-201 Monomaleimide	67894-74-0 (Y-LVE)	A supercooled liquid monomaleimide.		<ul style="list-style-type: none"> Hydrolytically resistant Supercooled liquid maleimide Moderate viscosity High thermal stability Low weight loss on cure High Tg 	Red Liquid/Soft Solid****	1,500	High Temperature Adhesives
R1173	MM-204 Dicyclopentadiene Acrylate	33791-58-1 (Y)	A monofunctional acrylate monomer.		<ul style="list-style-type: none"> Low viscosity High glass transition temp. Low cure shrinkage Hydrolytically resistant Diluent for thermoset resins High Tg 	Light Tan Liquid	50	UV or peroxide cured resins, coatings, or adhesives
R1175	MM-211 Maleimidocaproic Acid (MCA)	55750-53-3 (Y)	An intermediate chain length, maleimide terminated carboxylic acid.		<ul style="list-style-type: none"> Flexible aliphatic backbone Maleimide and carboxylic acid functional groups Adhesion promoter 	White/Light Yellow Powder	N/A	Intermediate for ester and amide linked maleimide monomers
R1139	MM-220 Tricyclopentane Acrylate	93962-84-6 (Y-LVE)	A low viscosity mono-acrylate monomer.		<ul style="list-style-type: none"> Low weight loss on cure Helps reduce cure shrinkage Low viscosity 	Light Yellow Liquid	< 100	UV cure coatings
R1121	MM-281 Maleimidoundecanoic Acid (MUDA)	57079-01-3 (Y-LVE)	A long chain maleimide terminated carboxylic acid.		<ul style="list-style-type: none"> Flexible aliphatic backbone Maleimide and carboxylic acid functional groups Adhesion promoter 	White to Off-White Powder	N/A	Intermediate for ester and amide linked maleimide monomers

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
R1134	MM-290 Isobornyl Cyclohexyl Acrylate (IBCHA)	903876-45-9 (Y)	A liquid mono-functional acrylate monomer.		-Lower weight loss on cure than Isobornyl Acrylate (IBOA) -Mild, pleasant odor, -Hydrolytic resistance	Light Tan Liquid	250	-UV or peroxide cured resins, coatings, or adhesives
R1134-HP	MM-290-HP Isobornyl Cyclohexyl Acrylate - Distilled	903876-45-9 (Y)	A further refined version of MM- 290 liquid mono-functional acrylate monomer.		-Very low color -Lower weight loss on cure than Isobornyl Acrylate (IBOA) -Mild, pleasant odor -Hydrolytic resistance	Colorless to Faint Yellow	125	-UV or peroxide cured resins, coatings, or adhesives
R1197	MM-304 Isobornyl Cyclohexyl Methacrylate (IBCHMA)	N/A (N)	A liquid mono-functional methacrylate monomer.		-Very low color -Lower weight loss on cure than Isobornyl Methacrylate (IBOMA) -Mild, pleasant odor, -Hydrolytic resistance	Colorless Liquid	80	-Dental -Reactive diluent
POLYESTER ACRYLATE METHACRYLATES						Room Temp	cP	
R1166	PEAM-541 Polyester Acrylate/Methacrylate	N/A (N)	A polyester acrylate/methacrylate that exhibits good flexibility with low CTE.		-Good toughener -Thermal stability -High adhesion* -Hydrolytic stability	Hazy Liquid	18,000 3,700 (40deg C)	-Electronic adhesives (i.e. die attach, etc)
R1096	PEAM-645 Polyester Acrylate/Methacrylate	921213-39-0 (Y)	A polyester acrylate/methacrylate that exhibits low CTE, high Tg, and high modulus.	 where n = 1 - 5	-High Tg -Low CTE -High adhesion* -Thermal stability	Amber Liquid	6,500 (40deg C)	-Low CTE thermosets
R1167	PEAM-883 Polyester Acrylate/Methacrylate	951244-55-6 (N)	A polyester acrylate/methacrylate that exhibits excellent adhesion, low warpage, and hydrophobicity.		-Low warpage -Hydrophobic -High adhesion* -Hydrolytic stability	Amber Liquid	4,500	-Die attach adhesives
R1168	PEAM-1008 Polyester Acrylate/Methacrylate	N/A (N)	A polyester acrylate/methacrylate that exhibits excellent adhesion, low warpage, and hydrophobicity.		-Low warpage -Hydrophobic -High adhesion* -Superior Hydrolytic stability	Amber Liquid	--	-Die attach adhesives

P/N	PRODUCT	CAS NO. TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE**	FEATURES	APPEARANCE	VISCOSITY (25deg C)	SUGGESTED APPLICATIONS
R1111	PEAM-1044 Polyester Acrylate/Methacrylate	921214-61-1 (Y)	A polyester acrylate/methacrylate that exhibits excellent adhesion, low warpage, and hydrophobicity.	 where n = 1 - 5	<ul style="list-style-type: none"> -Low warpage -Hydrophobic -High adhesion* -Thermal stability 	Amber Liquid	4,500	-Low stress coatings
R1144	PEAM-1769 Polyester Acrylate/Methacrylate	921214-61-1 (Y)	A polyester acrylate/methacrylate that exhibits excellent adhesion, ultra low warpage, and hydrophobicity.	 where n = 1 - 5	<ul style="list-style-type: none"> -Ultra low modulus -Hydrophobic -High adhesion* -Thermal stability -Adhesion to metals -Flexibilizer 	Amber Liquid	20,000	-Low stress coatings
POLYESTER METHACRYLATES						Room Temp	cP	
R1188	PEM-665 Polyester Methacrylate	N/A (N)	A methacrylate terminated polyester oligomer that has low color and low cure shrinkage.		<ul style="list-style-type: none"> -Low color -Low shrinkage -Thermal stability -Tough 	Light Yellow Tint Liquid	6,500 (50deg C)	-Dental
R1157	PEM-1066 Polyester Methacrylate	951244-55-6 (Y-LVE)	A polyester methacrylate that exhibits excellent adhesion, ultra low warpage, and hydrophobicity.		<ul style="list-style-type: none"> -Low modulus -Hydrophobic -Excellent hydrolytic resistance -High adhesion* -Adhesion to metals -Flexibilizer 	Light Yellow Liquid	20,000	-Dental -Moisture resistant coatings
HIGH TEMPERATURE URETHANES						Room Temp	cP	
R1095	U-793 Urethane Epoxy Methacrylate Resin (MEU)	869488-57-3 920758-62-9 920742-80-9 (Y)	Urethane resin functionalized with a methacrylate and an epoxy.	Unavailable	<ul style="list-style-type: none"> -Excellent toughener -Hydrophobic -Flexible -Adhesion promoter -Dual cure mechanism -Good thermal stability 	Viscous Brown Liquid	4,300	-Pre-applied adhesives -UV adhesives
R1102	U-835 Urethane Acrylate Methacrylate Resin (AMU)	869488-57-3 1003557-45-6 1003612-76-7 (Y-LVE)	Urethane resin functionalized with an acrylate and a methacrylate.	Unavailable	<ul style="list-style-type: none"> -Excellent toughener -Fast cure -Flexible -Hydrophobic -Good thermal stability 	Yellow Liquid	3,000	-Adhesives for metal -UV adhesives

DATA IS FOR REFERENCE ONLY AND MAY VARY DEPENDING ON TESING METHOD USED.

* Various substrates.

** Many of the structures are an idealized representation of a statistical distribution.

*** Supercooled.

**** Storage at < 25deg C will result in the precipitation of some solids. The fully liquid state can be regenerated by warming to 40deg C until all solids redissolve.

LVE = Material is manufactured under a Low Volume Exemption (LVE) in compliance with Section 5(h)(4) of the Toxic Substances Control Act (TSCA), 15 U.S.C.

TO PLACE AN ORDER, REQUEST SAMPLES, OR TO SPEAK WITH US ABOUT DEVELOPING A PRODUCT FOR YOUR CHEMICAL NEEDS, CONTACT US AT 858-348-1122.