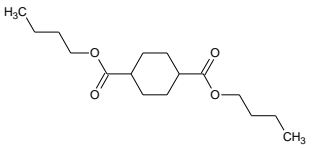
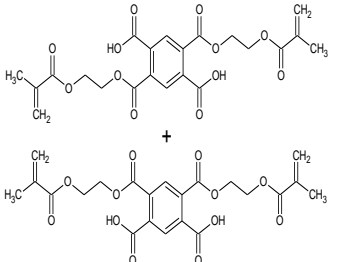
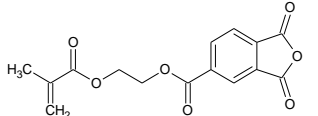
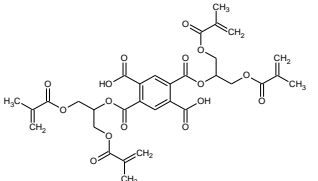


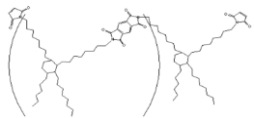
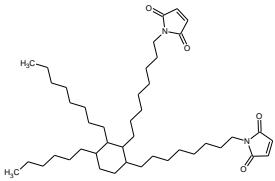
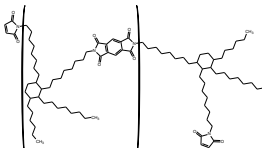
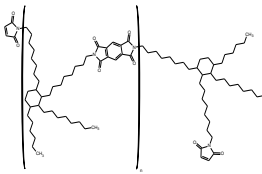
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>ANTI-BLEEDS</b>								
<b>A6150</b>	A-6150	1151519-17-3 (Y)	A proprietary <b>non-halogenated</b> additive designed to reduce resin bleed out on a variety of surfaces (especially difficult to control copper surfaces) with minimal or no effect on the adhesion properties of the formulation.	Unavailable	<ul style="list-style-type: none"> <li>• Excellent bleed control</li> <li>• Co-curable in free-radical polymerization</li> <li>• Minimal adhesion degradation</li> <li>• Non-halogenated– a 'green' alternative to conventional anti-bleed and mold release materials</li> </ul>	Yellow Liquid	100	<ul style="list-style-type: none"> <li>• For use as an additive to reduce resin bleed out specifically on metal surfaces</li> </ul>
<b>A6150</b>	A-6150	1151519-17-3 (Y)	A proprietary <b>non-halogenated</b> additive designed to reduce resin bleed out on a variety of surfaces (especially difficult to control copper surfaces) with minimal or no effect on the adhesion properties of the formulation.	Unavailable	<ul style="list-style-type: none"> <li>• Excellent bleed control</li> <li>• Co-curable in free-radical polymerization</li> <li>• Minimal adhesion degradation</li> <li>• Non-halogenated– a 'green' alternative to conventional anti-bleed and mold release materials</li> </ul>	Yellow Liquid	100	<ul style="list-style-type: none"> <li>• For use as an additive to reduce resin bleed out specifically on metal surfaces</li> </ul>
<b>A6150</b>	A-6150	1151519-17-3 (Y)	A proprietary <b>non-halogenated</b> additive designed to reduce resin bleed out on a variety of surfaces (especially difficult to control copper surfaces) with minimal or no effect on the adhesion properties of the formulation.	Unavailable	<ul style="list-style-type: none"> <li>• Excellent bleed control</li> <li>• Co-curable in free-radical polymerization</li> <li>• Minimal adhesion degradation</li> <li>• Non-halogenated– a 'green' alternative to conventional anti-bleed and mold release materials</li> </ul>	Yellow Liquid	100	<ul style="list-style-type: none"> <li>• For use as an additive to reduce resin bleed out specifically on metal surfaces</li> </ul>
<b>A6280</b>	A-6280	2999663-83-9 (N)	A proprietary <b>non-halogenated</b> additive designed to reduce resin bleed out on a variety of surfaces (especially difficult to control gold surfaces) with minimal or no effect on the adhesion properties of the formulation.	Unavailable	<ul style="list-style-type: none"> <li>• Excellent bleed control</li> <li>• Co-curable in free-radical polymerization</li> <li>• Minimal adhesion degradation</li> <li>• Non-halogenated – a 'green' alternative to conventional anti-bleed and mold release materials</li> </ul>	Yellow Liquid	63	<ul style="list-style-type: none"> <li>• For use as an additive to reduce resin bleed out specifically on metal surfaces</li> </ul>

# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>FUNCTIONAL ADDITIVES</b>								
<b>A6165</b>	A-6165	1151654-51-1 (Y)	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"> <li>Improves electrical conductivity in metal filled conductive paste formulations</li> <li>Soluble in most resin systems</li> <li>May improve thermal conductivity in some formulations</li> </ul>	Dark Brown / Black	Very viscous	<ul style="list-style-type: none"> <li>Increases electrical conductivity of resin system</li> </ul>
<b>A6220</b>	A-284	93158-39-5 (Y)	Dibutyl-1,4 Cyclohexanedicarboxylate		<ul style="list-style-type: none"> <li>Plasticizer</li> <li>Non-phthalate</li> <li>Very low viscosity</li> </ul>	Colorless Liquid	30	<ul style="list-style-type: none"> <li>For use as a plasticizer in applications where human contact is expected</li> </ul>
<b>R1217-M</b>	A-478-M	111308-10-2 (N)	Pyromellitic Dianhydride Dimethacrylate – Mixture of Isomers		<ul style="list-style-type: none"> <li>Versatile adhesion promoter</li> </ul>	Fine White Powder	Solid	<ul style="list-style-type: none"> <li>Adhesion promoter</li> </ul>
<b>R1231</b>	A-304	70293-55-9 (N)	4-Metacryloxyethyl Trimellitic Anhydride		<ul style="list-style-type: none"> <li>Adhesion Promoter</li> <li>Versatile adhesion promoter</li> </ul>	White Powder / Crystals	Solid	<ul style="list-style-type: none"> <li>Adhesion promoter</li> </ul>
<b>R1251</b>	A-675-100%	148019-46-9 (Y)	PMGDM		<ul style="list-style-type: none"> <li>Versatile adhesion promoter</li> </ul>	Light Yellow	Very viscous	<ul style="list-style-type: none"> <li>Adhesion promoter</li> </ul>

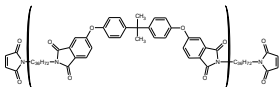
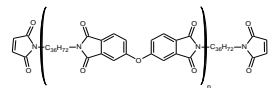
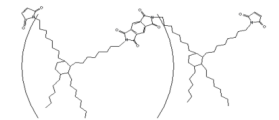
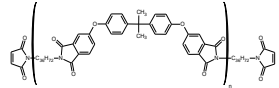
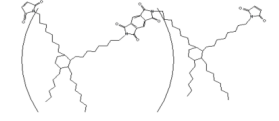
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	CAVITY PERTURBATION METHOD @ 20 GHZ	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>IMIDE-EXTENDED BISMALIMIDES</b>									
<b>R1090</b>	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"> <li>Toughener</li> <li>Hydrophobic</li> <li>High adhesion *</li> <li>Superior thermal stability</li> </ul>	Dk : N/A Df : N/A	Red-Amber Gel	Solid	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>
<b>R1155</b>	BMI-689	Original: 682800-79-9 Current: 1911605-95-2 (Y)	A unique very low viscosity BMI resin	 contains unsaturation	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>High adhesion *</li> <li>Superior thermal stability</li> </ul>	Dk : 2.4 Df : 0.0023	Yellow to Amber Liquid	1,500 ± 500	<ul style="list-style-type: none"> <li>Base resin or additive in thermoset formulations designed for high temperature resistance</li> </ul>
<b>R1171-P</b>	BMI-5000 Powder	921213-77-6 (Y)	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"> <li>Low cross-link density</li> <li>Non-tacky</li> <li>Film-forming</li> <li>Maleimide functional oligomer</li> <li>Cures to a tough thermoset</li> <li>Additive to enhance toughness in thermoset compositions</li> </ul>	Dk : 2.4 Df : 0.0023	Light Yellow Powder	Solid	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Thermally resistant adhesives</li> </ul>
<b>R1171-T</b>	BMI-5000 Toluene	921213-77-6 (Y)	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"> <li>Low cross-link density</li> <li>Non-tacky</li> <li>Film-forming</li> <li>Maleimide functional oligomer</li> <li>Cures to a tough thermoset</li> <li>Additive to enhance toughness in thermoset compositions</li> </ul>	Dk : 2.4 Df : 0.0023	Dark Brown Liquid	1,000	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Thermally resistant adhesives</li> </ul>

# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	CAVITY PERTURBATION METHOD @ 20 GHZ	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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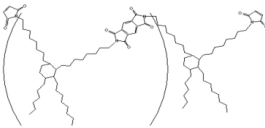
## IMIDE-EXTENDED BISMALIMIDES continued...

<b>R1191</b>	BMI-1700	1224691-98-8 (Y)	An amorphous, low molecular weight bismaleimide oligomer that exhibits good adhesion to a variety of substrates	 Where n = 1 to 10	<ul style="list-style-type: none"> <li>Soluble in many reactive diluents</li> <li>Hydrophobic</li> <li>Superior thermal stability</li> <li>High adhesion to various substrates</li> </ul>	Dk : 2.3 Df : 0.00176	Amber High Viscous Liquid	30,000 ± 10,000 (60°C)	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>
<b>R1203</b>	BMI-1500	1290041-56-3 (Y)	An amorphous, low molecular weight bismaleimide oligomer that exhibits good adhesion to a variety of substrates	 Where n = 1 to 10	<ul style="list-style-type: none"> <li>Soluble in many reactive diluents</li> <li>Hydrophobic</li> <li>Superior thermal stability</li> <li>High adhesion to various substrates</li> </ul>	Dk : 2.42 Df : 0.0021	Amber Viscous Liquid	20,000 ± 10,000 (60°C)	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>
<b>R1225</b>	BMI-3000 CG	921213-77-6 (Y)	Low cost 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"> <li>Low cost</li> <li>Toughener</li> <li>Hydrophobic</li> <li>High adhesion *</li> <li>Superior thermal stability</li> </ul>	Dk : 2.34 Df : 0.0016	Light Yellow Powder	Solid	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>
<b>R1232</b>	BMI-1400	1224691-98-8 (Y)	An amorphous, low molecular weight bismaleimide oligomer that exhibits good adhesion to a variety of substrates	 Where n = 1 to 10	<ul style="list-style-type: none"> <li>Specialty formulated lower viscosity version of BMI-1700</li> </ul>	Dk : 2.3 Df : 0.00245	Amber High Viscous Liquid	6,500 ± 1,000 (60°C)	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>
<b>R1288</b>	BMI-3000J Powder	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"> <li>Toughener</li> <li>Hydrophobic</li> <li>High adhesion *</li> <li>Superior thermal stability</li> </ul>	Dk : 2.195 Df : 0.00136	Light Yellow Powder	Solid	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> <li>Adhesion to metal</li> </ul>

# PRODUCT SELECTOR GUIDE

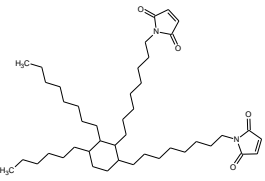
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## IMIDE-EXTENDED BISMALIMIDES continued...

<b>R1288S</b>	BMI-3000 Solution	921213-77-6 (Y)	Bismaleimide oligomer that exhibits excellent flexibility and, on cure, forms very tough hydrophobic polyimides	 <p>Where n = 1 to 10</p>	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>Excellent dielectric properties</li> <li>Superior thermal stability</li> </ul>	Dk : 2.4 Df : 0.0017	Light Amber Liquid	N/A	<ul style="list-style-type: none"> <li>Additive to increase flexibility, hydrophobicity and thixotropy.</li> </ul>
<b>R1316</b>	BMI-2500	2020378-57-6 (Y)	Designed to extend the range of applications suitable for use with Designer Molecules, Inc. Imide-Extended Bismaleimide Oligomers to those in need of higher Tg and modulus.	N/A	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>High adhesion *</li> <li>Superior thermal stability</li> <li>Low pH hydrolytic resistance</li> <li>Reduce resin bleed out</li> </ul>	Dk : 2.3 Df : 0.0015	Light Yellow Glassy Powder	Solid	<ul style="list-style-type: none"> <li>Additive to increase flexibility, hydrophobicity, thixotropy</li> <li>Base resin – produces films that are tough, flexible, &amp; have good peel strength</li> </ul>
<b>R1334</b>	BMI-6000	2095324-53-9 (N)	Has excellent thermal stability and workability. It is soluble in a variety of solvents such as cyclopentanone, cyclohexanone, MEK, DMF, DMAC, and NMP in combination with aromatic solvents	N/A	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>Super thermal stability</li> <li>Good dielectric properties</li> <li>Excellent workability</li> <li>High Tg</li> <li>Low CTE</li> </ul>	Dk : 2.6 Df : 0.008	Light yellow powder	Solid	<ul style="list-style-type: none"> <li>Adhesive layer when laminating materials</li> <li>Adhesion promoter</li> </ul>
<b>R1354</b>	BMI-2560	2126832-79-7 (N)	Designed to extend the range of applications suitable for use with the Designer Molecules, Inc. imide extended bismaleimide oligomers to those in need of higher Tg and modulus	N/A	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>Superior thermal stability</li> </ul>	Dk : 2.5 Df : 0.0016	Light Yellow Glassy Powder	Solid	<ul style="list-style-type: none"> <li>An additive to increase flexibility, hydrophobicity and thixotropy</li> </ul>

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	CAVITY PERTURBATION METHOD @ 20 GHZ	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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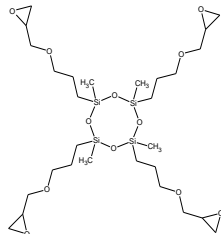
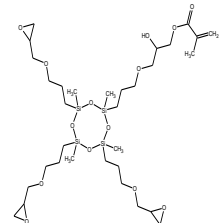
## IMIDE-EXTENDED BISMALEIMIDES continued...

<b>R1356</b>	BMI-6100	2127116-97-4 (N)	A high molecular weight, curable bismaleimide (BMI) oligomer mixture suitable for use as the base resin in a variety of microelectronic assembly applications	N/A	<ul style="list-style-type: none"> <li>Flexibility / High strength</li> <li>Curability / Hydrophobicity</li> <li>Superior electrical properties</li> </ul>	Dk : 2.65 Df : 0.005	Amber liquid	370	<ul style="list-style-type: none"> <li>Recommended for use as a polyimide (PI) replacement resin in CCL applications</li> </ul>
<b>R1442</b>	BMI-689M	1911605-95-2 (Y)	A unique low viscosity liquid bismaleimide based on a non-hydrogenated dimer diamine backbone and serves as a low-cost alternative to DMI's BMI-689	 <p>contains unsaturation</p>	<ul style="list-style-type: none"> <li>Low viscosity liquid BMI</li> <li>Hydrophobic</li> <li>Superior thermal stability</li> </ul>	Dk : 2.4 Df : 0.0023	Dark amber liquid	5,000 ± 2,000	<ul style="list-style-type: none"> <li>An additive or base resin in adhesives that are designed for high temperature resistance</li> </ul>
<b>R1453</b>	BMI-4200	N/A (N)	Designed to extend the range of applications suitable for use with DMI's imide extended BMI oligomers to those in need of a higher Tg and modulus. It can be processed in a resin system as a solid or dissolved in a solvent.	N/A	<ul style="list-style-type: none"> <li>Toughener</li> <li>Hydrophobic</li> <li>Increased Tg &amp; modulus for demanding applications</li> <li>Superior thermal stability</li> </ul>	Dk : 2.64 Df : 0.00206	Yellow granules	Solid	<ul style="list-style-type: none"> <li>An additive to increase hydrophobicity and thixotropy</li> </ul>

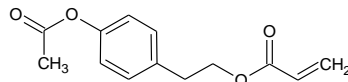
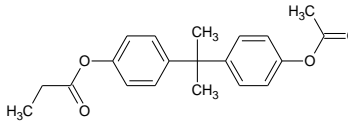
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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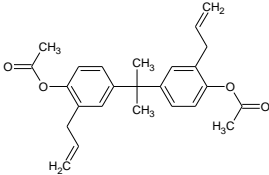
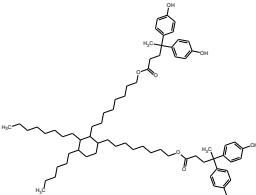
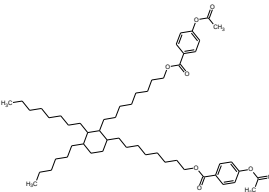
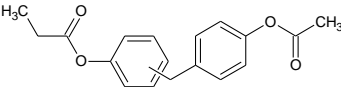
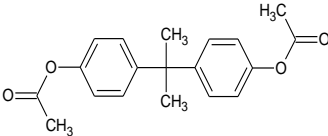
## FUNCTIONAL CYCLOSILOXANES

<b>R1362</b>	CS-697	257284-60-9 (Y)	A polyglycidyl ether cyclosiloxane monomer		<ul style="list-style-type: none"> <li>• Multifunctional</li> <li>• UV curable</li> <li>• Low chloride</li> <li>• Low viscosity</li> <li>• Colorless</li> </ul>	Colorless Liquid	200	<ul style="list-style-type: none"> <li>• UV curable additive</li> </ul>
<b>R1366</b>	CS-783	921214-21-3 (Y)	Methacrylate epoxy functional hybrid cyclosiloxane monomer		<ul style="list-style-type: none"> <li>• Dual cure mechanism</li> <li>• Multifunctional</li> <li>• UV Curable</li> <li>• Low chloride</li> <li>• Low viscosity</li> </ul>	Yellow Liquid	250	<ul style="list-style-type: none"> <li>• Hybrid cures</li> <li>• UV cures</li> <li>• B-stageable adhesives</li> </ul>

## PHENYL ESTER EPOXY CURATIVES

<b>R1146</b>	EC-234	926305-16-0 (Y-LVE)	Phenyl ester epoxy curative hybrid		<ul style="list-style-type: none"> <li>• Hybrid cure</li> <li>• Low viscosity</li> </ul>	Light Yellow Liquid	40	<ul style="list-style-type: none"> <li>• UV adhesives</li> <li>• B-stageable adhesives</li> </ul>
<b>R1147</b>	EC-326	936555-33-8 (Y-LVE)	Bisphenol A based acetate/propionate epoxy curative		<ul style="list-style-type: none"> <li>• Hydrolytically resistant</li> <li>• Low melting point</li> <li>• Thermal stability</li> <li>• Hydrophobic</li> <li>• Toughener</li> <li>• Does not impede free radical cure</li> </ul>	White/Yellow Solid	2,000 ***	<ul style="list-style-type: none"> <li>• Film adhesives</li> <li>• Pre-applied adhesives</li> </ul>

# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>PHENYL ESTER EPOXY CURATIVES continued...</b>								
R1148	EC-392	107466-61-9 (Y)	Phenyl ester epoxy curative hybrid of diallyl bisphenol A		<ul style="list-style-type: none"> <li>Dual cure mechanism</li> <li>High cross-link density</li> <li>Multifunctional</li> <li>Thermal stability</li> </ul>	Amber Liquid	2,500	<ul style="list-style-type: none"> <li>B-stageable adhesives</li> <li>Epoxy and BMI co-curative</li> </ul>
R1149	EC-1074	926657-64-9 (Y)	A tetra-phenol epoxy curative derived from dimerdiol		<ul style="list-style-type: none"> <li>Low modulus</li> <li>Toughener</li> <li>Hydrolytically resistant thermosets</li> <li>Hydrophobic</li> <li>Thermal stability</li> </ul>	Amber Glassy Solid	Solid	<ul style="list-style-type: none"> <li>Film Adhesives</li> <li>Pre-applied adhesive compositions</li> </ul>
R1165	EC-861	1071523-12-0 (Y)	Phenyl acetate epoxy curative		<ul style="list-style-type: none"> <li>Low modulus</li> <li>Toughener</li> <li>Hydrolytically resistant thermosets</li> <li>Hydrophobic</li> <li>Thermal stability</li> <li>Does not impede free radical cure</li> </ul>	Amber/Yellow Liquid	2,500	<ul style="list-style-type: none"> <li>Low stress epoxy thermosets</li> </ul>
R1170	EC-298	1044794-71-7 (Y-LVE)	Difunctional phenyl ester epoxy curative		<ul style="list-style-type: none"> <li>Stable</li> <li>Low viscosity</li> <li>Does not impede free radical cure</li> </ul>	Light Yellow Liquid	500	<ul style="list-style-type: none"> <li>Thermoset adhesives</li> <li>Curative for epoxy / (meth)acrylate hybrids</li> <li>Hybrid epoxy/free radical thermosets</li> </ul>
R1227	EC-312	10192-62-8 (Y)	Difunctional phenyl ester epoxy curative		<ul style="list-style-type: none"> <li>Low cost</li> <li>Low melting point</li> <li>Thermal stability</li> <li>Hydrophobic</li> <li>Does not impede free radical cure</li> </ul>	Fine White Powder	Solid	<ul style="list-style-type: none"> <li>Film adhesives</li> <li>Pre-applied adhesives</li> </ul>



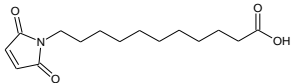
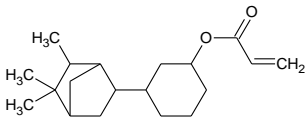
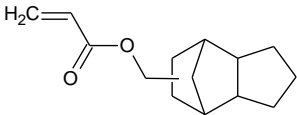
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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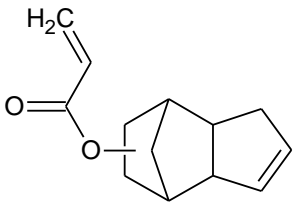
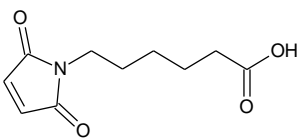
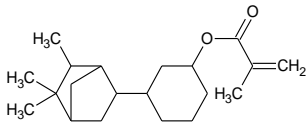
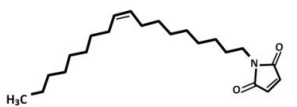
## EPOXY CATALYSTS

<b>R1198</b> <b>R1207</b> <b>R1208</b> <b>R1209</b>	ECAT-243 ECAT-259 ECAT-353 ECAT-434	1253404-90-8 (Y) 1313999-39-1 (Y) 1325729-75-6 (Y) 1332716-20-7 (Y)	Imidazole Epoxy Catalysts	Unavailable	<ul style="list-style-type: none"> <li>• Good solubility in most epoxy monomers</li> <li>• Excellent latency characteristics</li> <li>• Can be used as a catalyst or curative</li> <li>• Tunable cures</li> <li>• Promotes clean, rapid monomodal cures</li> </ul>	Refer to TDS	Solid	<ul style="list-style-type: none"> <li>• Electronic mold compounds</li> <li>• Underfills</li> </ul>
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## MONOFUNCTIONAL MONOMERS

<b>R1121</b>	MM-281	57079-01-3 (Y-LVE)	Maleimidoundecanoic Acid (MUDA)		<ul style="list-style-type: none"> <li>• Flexible aliphatic backbone</li> <li>• Maleimide &amp; carboxylic acid functional groups</li> <li>• Adhesion promoter</li> </ul>	White to Off-white Powder	N/A	<ul style="list-style-type: none"> <li>• Intermediate for ester and amide linked maleimide monomers</li> </ul>
<b>R1134</b>	MM-290	903876-45-9 (Y)	Isobornyl Cyclohexyl Acrylate		<ul style="list-style-type: none"> <li>• Lower weight loss on cure than Isobornyl Acrylate (IBOA)</li> <li>• Mild, pleasant odor</li> <li>• Hydrolytic resistance</li> </ul>	Light Tan Liquid	250	<ul style="list-style-type: none"> <li>• UV or peroxide cured resins, coatings, or adhesives</li> </ul>
<b>R1139</b>	MM-220	93962-84-6 (Y-LVE)	Tricyclodecane Acrylate		<ul style="list-style-type: none"> <li>• Low weight loss on cure</li> <li>• Helps reduce cure shrinkage</li> <li>• Low viscosity</li> </ul>	Light Yellow Liquid	< 100	<ul style="list-style-type: none"> <li>• UV cure coatings</li> </ul>

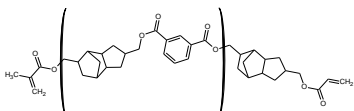
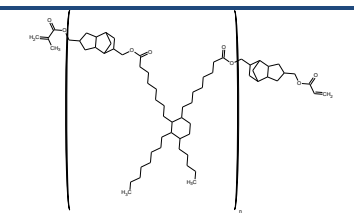
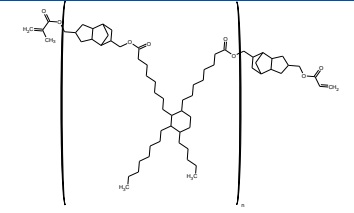
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>MONOFUNCTIONAL MONOMERS continued...</b>								
R1173	MM-204	33791-58-1 (Y)	Monofunctional acrylate monomer		<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• High glass transition temperature</li> <li>• Low cure shrinkage</li> <li>• Hydrolytically resistant</li> <li>• Diluent for thermoset resins</li> <li>• High Tg</li> </ul>	Light Tan Liquid	50	<ul style="list-style-type: none"> <li>• UV or peroxide cured resins, coatings, or adhesives</li> </ul>
R1175	MM-211	55750-53-3 (N)	An intermediate chain length, maleimide terminated carboxylic acid		<ul style="list-style-type: none"> <li>• Flexible aliphatic backbone</li> <li>• Maleimide and carboxylic acid functional groups</li> <li>• Adhesion promoter</li> </ul>	White/Light Yellow Powder	N/A	<ul style="list-style-type: none"> <li>• Intermediate for ester and amide linked maleimide monomers</li> </ul>
R1197	MM-304	N/A (N)	Isobornyl Cyclohexyl Methacrylate		<ul style="list-style-type: none"> <li>• Very low color</li> <li>• Lower weight loss on cure than Isobornyl Methacrylate (IBOMA)</li> <li>• Mild, pleasant odor</li> <li>• Hydrolytic resistance</li> </ul>	Colorless Liquid	80	<ul style="list-style-type: none"> <li>• Dental</li> <li>• Reactive diluent</li> </ul>
R1233	MM-348	132010-64-1 (N)	Maleimide Terminated 9-Octadecene		<ul style="list-style-type: none"> <li>• Maleimide functional reactive diluents</li> </ul>	Light brown	Semi-solid	<ul style="list-style-type: none"> <li>• Reactive diluent</li> </ul>

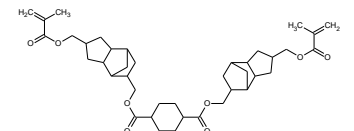
# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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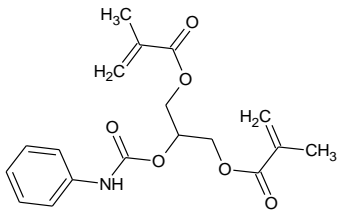
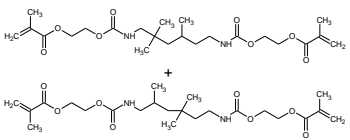
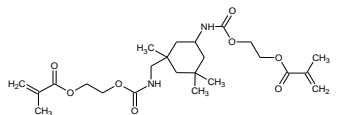
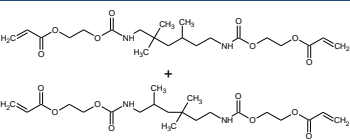
## POLYESTER ACRYLATE METHACRYLATES (PEAM)

<b>R1096</b>	PEAM-645	921213-39-0 (Y)	Polyester Acrylate/Methacrylate	 <p>Where n = 1 to 5</p>	<ul style="list-style-type: none"> <li>• High Tg</li> <li>• High modulus</li> <li>• Low CTE</li> <li>• High adhesion I</li> <li>• Thermal stability</li> </ul>	Amber Liquid	6,500	<ul style="list-style-type: none"> <li>• Low CTE thermosets</li> </ul>
<b>R1111</b>	PEAM-1044	921214-61-1 (Y)	Polyester Acrylate/Methacrylate	 <p>Where n = 1 to 5</p>	<ul style="list-style-type: none"> <li>• Low warpage</li> <li>• Hydrophobic</li> <li>• High adhesion *</li> <li>• Thermal stability</li> </ul>	Amber Liquid	(40°C)	<ul style="list-style-type: none"> <li>• Low stress coatings</li> </ul>
<b>R1144</b>	PEAM-1769	921214-61-1 (Y)	Polyester Acrylate/Methacrylate	 <p>Where n = 1 to 5</p>	<ul style="list-style-type: none"> <li>• Ultra-low modulus</li> <li>• Hydrophobic</li> <li>• High adhesion *</li> <li>• High thermal stability</li> <li>• Adhesion to metals</li> <li>• Flexibilizer</li> </ul>	Amber Liquid	4,500	<ul style="list-style-type: none"> <li>• Low stress coatings</li> </ul>

## POLYESTER METHACRYLATES (PEM)

<b>R9990</b>	PEM-665	N/A (N)	Methacrylate terminated polyester oligomer		<ul style="list-style-type: none"> <li>• Low color</li> <li>• Low cure shrinkage</li> <li>• Thermal stability</li> <li>• Tough</li> </ul>	Light Yellow Tint Liquid	6,500 (50°C)	<ul style="list-style-type: none"> <li>• Dental BisGMA replacement</li> </ul>
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# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
<b>FUNCTIONAL URETHANES</b>								
R1095	U-793	869488-57-3 920758-62-9 902742-80-9 (Y)	Urethane resin functionalized with a methacrylate and an epoxy	Unavailable	<ul style="list-style-type: none"> <li>• Low color</li> <li>• Low cure shrinkage</li> <li>• Thermal stability</li> <li>• Tough</li> </ul>	Light Yellow Tint Liquid	6,500 (50°C)	• Dental
R1102	U-835	869488-57-3 1003557-45-6 1003612-76-7 (Y-LVE)	Urethane resin functionalized with acrylate and methacrylate end groups	Unavailable	<ul style="list-style-type: none"> <li>• Low modulus</li> <li>• Excellent hydrolytic resistance</li> <li>• High adhesion *</li> <li>• Adhesion to metals</li> <li>• Flexibilizer</li> </ul>	Light Yellow Liquid	20,000	<ul style="list-style-type: none"> <li>• Dental</li> <li>• Moisture resistant coatings</li> </ul>
R1216	U-347	1371570-15-8 (N)	Phenyl glycerol urethane dimethacrylate (PGDMA)		<ul style="list-style-type: none"> <li>• Low cure shrinkage</li> <li>• Colorless</li> <li>• Good refractive index</li> <li>• Not bisphenol A based</li> </ul>	Clear Colorless Liquid	9,500	<ul style="list-style-type: none"> <li>• Dental</li> <li>• Moisture resistant coatings</li> </ul>
R1228	U-471	72869-86-4 (Y)	TMDI urethane dimethacrylate monomer		<ul style="list-style-type: none"> <li>• Low color</li> <li>• Low cure shrinkage</li> </ul>	Slight Yellow Liquid	8,000	• Dental
R1230	U-483	N/A (N)	IPDI urethane dimethacrylate		<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• Low cure shrinkage</li> <li>• Colorless</li> <li>• Not bisphenol A based</li> </ul>	Clear Colorless Liquid	5,000	<ul style="list-style-type: none"> <li>• Dental</li> <li>• Moisture resistant coatings</li> <li>• Light cure coatings</li> </ul>
R1266	U-443	67910-48-9 (N)	TMDI urethane diacrylate monomer		<ul style="list-style-type: none"> <li>• Excellent Curing Properties</li> </ul>	Clear Colorless Oil	5,500	• Light-cured coating resins

# PRODUCT SELECTOR GUIDE

PART NUMBER	CATALOG NAME	CAS / TSCA Listed (Y/N)	DESCRIPTION	STRUCTURE **	FEATURES	APPEARANCE	VISCOSITY (cP @ 25°C)	SUGGESTED APPLICATIONS
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## FORMULATED PRODUCTS

<b>R1353</b>	DMI-2575	Mixture (Y)	Unique low viscosity liquid bismaleimide based formulation suitable for use as a base resin system for spray applications	Mixture	<ul style="list-style-type: none"> <li>• Pre-catalyzed</li> <li>• Extended pot-life (&lt; 6mo. @ room temp)</li> <li>• Hydrophobic</li> <li>• Solvent free</li> <li>• Superior thermal stability</li> <li>• Does not require refrigerated shipping</li> </ul>	Amber liquid	1400 ± 300	<ul style="list-style-type: none"> <li>• Spray coating applications</li> </ul>
<b>R1397</b>	DMI-3006A	Mixture (Y)	Modified polyimide based negative type photoresist	Mixture	<ul style="list-style-type: none"> <li>• Low modulus</li> <li>• Very high electrical reliability</li> <li>• UV cured-low thermal requirements</li> <li>• Low cure shrinkage</li> <li>• High heat resistance</li> <li>• Good electrical properties</li> </ul>	Amber liquid	250	<ul style="list-style-type: none"> <li>• Wafer buffer coating</li> </ul>
<b>R1398</b>	DMI-2555	Mixture (Y)	A BMI-based coating for dispense applications	Mixture	<ul style="list-style-type: none"> <li>• Pre-catalyzed</li> <li>• Low modulus</li> <li>• Hydrophobic</li> <li>• Excellent hydrolytic resistance</li> <li>• Low stress</li> <li>• Adhesion to metals</li> <li>• Flexibilizer</li> </ul>	Yellow to Dark Amber Liquid	900 ± 200	<ul style="list-style-type: none"> <li>• Die top coating applications</li> </ul>

# PRODUCT SELECTOR GUIDE

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<b>IMIDE-LINKED</b>								
<b>R1363</b>	ILR-1363	Mixture (N)	A high molecular weight, curable oligomer mixture suitable for use as the base resin in a variety of microelectronic assembly applications	Unavailable	<ul style="list-style-type: none"> <li>High strength</li> <li>Flexible</li> <li>Hydrophobic</li> <li>High heat resistance</li> <li>Good electrical properties</li> </ul>	Amber liquid	750	<ul style="list-style-type: none"> <li>A polyimide (PI) replacement resin</li> </ul>
<b>R1399</b>	ILR-1399	3027864-14-5 (N)	A proprietary high molecular weight functionalized polyimide designed specifically to resist degradation when exposed to elevated temperatures for extended durations	Unavailable	<ul style="list-style-type: none"> <li>Thermally curable</li> <li>Tough</li> <li>Superior thermal stability</li> <li>Hydrophobic</li> </ul>	Amber liquid	15,000 @ 25% Solids	<ul style="list-style-type: none"> <li>For use in LED assembly applications or where high temperature stability is required.</li> </ul>
<b>R1400</b>	ILR-1400	2489312-38-9 (N)	High molecular weight non-functionalized polyimide with excellent physical properties	Unavailable	<ul style="list-style-type: none"> <li>Very Flexible film</li> <li>Good thermal stability (Td = &gt; 400°C)</li> <li>Good wetting property post b-stage on copper foil</li> <li>Superior dielectric properties</li> <li>Low water absorption</li> <li>Soluble in most aromatic and aliphatic solvents</li> </ul>	Amber liquid	1,500 @ 15% Solids	<ul style="list-style-type: none"> <li>For use where flexibility and good electrical properties are required</li> </ul>
<b>R1401</b>	ILR-1401	Mixture (Y)	A high molecular weight, curable oligomer mixture suitable for use as the base resin in a variety of microelectronic assembly applications	Unavailable	<ul style="list-style-type: none"> <li>Very low material shrinkage</li> <li>Flexible / high strength</li> <li>Curability &amp; very low modulus</li> <li>Hydrophobic / low water absorption</li> </ul>	Amber liquid	5,000 @ 20% Solids	<ul style="list-style-type: none"> <li>For use in applications that require high temperature resin performance such as CCL</li> </ul>
<b>R1402</b>	ILR-1402	Mixture (Y)	A high molecular weight, curable oligomer mixture suitable for use as the base resin in a variety of microelectronic assembly applications	Unavailable	<ul style="list-style-type: none"> <li>Very low material shrinkage</li> <li>Flexible / high strength</li> <li>Curability &amp; very low modulus</li> <li>Hydrophobic / low water absorption</li> </ul>	Amber liquid	4,000 @ 20% Solids	<ul style="list-style-type: none"> <li>For use in applications that require high temperature resin performance such as CCL</li> </ul>
<b>R1457</b>	ILR-1457	3027864-14-5 (N)	A proprietary high molecular weight functionalized polyimide designed specifically to resist degradation when exposed to elevated temperatures for extended durations	Unavailable	<ul style="list-style-type: none"> <li>Thermally curable</li> <li>Tough</li> <li>Superior thermal stability</li> <li>Hydrophobic</li> </ul>	Amber liquid	2,500 @ 25% Solids	<ul style="list-style-type: none"> <li>For use in high temperature adhesive applications</li> </ul>

ALL DATA PROVIDED FOR REFERENCE ONLY AND MAY VARY BY TEST METHOD

- \* Various substrates
- \*\* Many of the structures are an idealized representation of a statistical distribution
- \*\*\* Supercooled
- \*\*\*\* Storage at < 25°C will result in precipitation of some solids. The fully liquid state can be regenerated by warming to 40°C until all solids dissolve
- LVE Material manufactured under 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