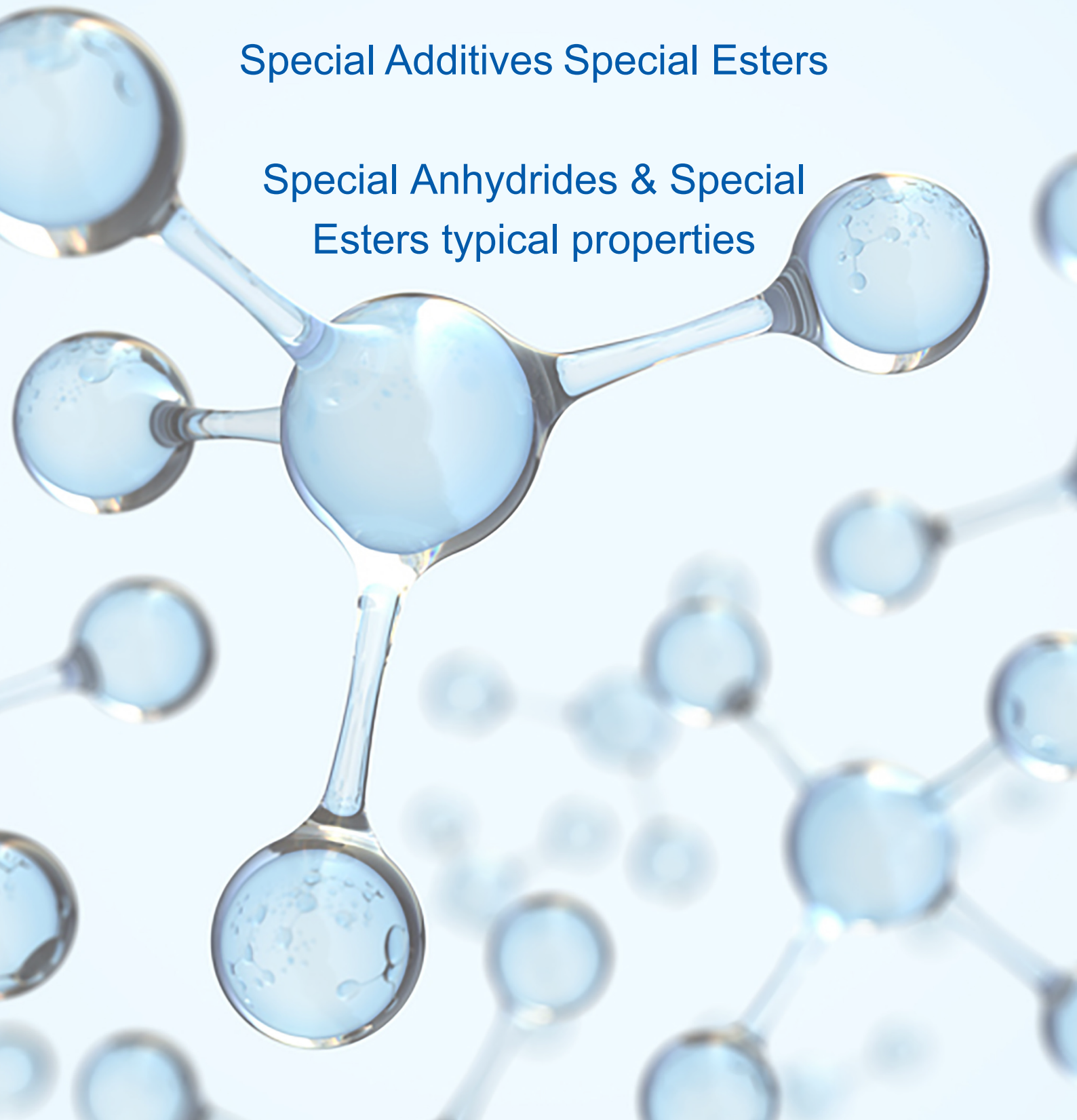
Polynt Group

Special Additives Special Esters

Special Anhydrides & Special Esters typical properties



POLYNT INTERMEDIATES & SPECIALTIES

Special Anhydrides and Special Esters

Production Site

EMEA
Polynt S.p.A.
(Cavaglià, Scanzorosciate - Italy)
Polynt UK Ltd.

Polynt Group

After the merger with Reichhold on May 2017 the new Polynt Group is a global Company in the Intermediates, Coating and Composite Resins, Thermoset Compounds, Gel-coats and niche Specialties. This combination enhances the Group's leading position as a global vertically integrated specialty chemicals player, with significant global presence in Europe, North America and Asia, a strategy initiated by Polynt with the successful integration of PCCR and CCP in the last years and now further reinforced by Reichhold's global scale, extensive product portfolio and R&D competencies.
Polynt Group is known for its superior quality and impressive range of products and with its excellent distribution network it can provide first-class service to customers whatever their market. Customer Service and Technical Service teams are renowned for their customer focus, offering the best service even after products have left manufacturing.
The Group strives to keep customers satisfied, assisting them in producing premium quality products every time they use its products. Product innovation is important for the Group's business and it's the reason for which it constantly works with customers to find solutions to problems. Introducing new or improved products ensures that Polynt Group continue not only to deliver what the market wants and needs, but also when it is wanted and needed.

Special Additives and Special Esters

Special additives include special anhydrides and special esters. The company is one of the world major manufacturers of these products.

Special Anhydrides are maleic derivatives manufactured starting from maleic anhydride and conjugated double bonds compounds i.e. butadiene or isoprene. Some anhydrides grades can be further transformed by hydrogenation in order to impart them additional performance properties for example higher UV stability.
Thanks to its backwards integration in Maleic Anhydride, Polynt S.p.A. is a world major manufacturer of Special Anhydrides being the only European producer of such products. Our anhydrides are used in several industrial applications:

- As hardener for epoxy resin in the electronic and electrical markets, for the manufacturing of: LED and PCB (printed circuits boards), insulation of motors and generators, insulators, bushings and switchgears; electronic transformers and semi-conductors.
- As hardeners for epoxy resins in industrial sectors: high/medium pressure pipes for oil & gas and reverse osmosis, wind turbine blades and wind mill components, pultruded parts for electrical and composite applications.
- As raw materials for manufacturing resins for paint and coatings, plasticizers and as intermediate for miscellaneous applications.

Special Esters represent a large family of products like acetates, glycerol derivatives, low-molecular weight phthalates, citrates, maleates, fumarates, succinates and other organic esters used in special applications.

They find a wide range of applications such as: flavours and fragrances (solvents, fixatives, additives), cosmetics (emollients, solvents and plasticizers), food (additives, ingredients), pharmaceutical (excipients), polymers and plastics (plasticizers), paints and coatings (solvents and coalescent agents), adhesives (solvents, plasticizers), inks (plasticizers, solvents), peroxides (extenders and solvents), foundries (binder agents for molds and hardeners), tobacco (plasticizers for cigarette filters), leather (finishing agents), lubricants (metalworking additives), textile (additives).

The family of Special Esters includes:

- Succinates: DMS (Dimethyl Succinate); DIPS (Di-isopropyl Succinate); DEAS (Acetonyl Di-Ethyl Succinate); Di-Lynt ES; DES (Diethyl Succinate).
- Esters of fatty acids: Oleates: SMO Sorbitan monooleate, TMP TO Trimethylolpropane trioleate; Oleate, Laurate, Stearate PEGs esters: PEG 200 MO, PEG 200 DO, PEG 400 MO, PEG 400 DO, PEG 400 M, PEG 600 MO, PEG 600 DO, PEG 600 DT, PEG 1000 MS, PEG 400 ML.
- Acetates: 2 EHA 2-Ethylhexyl Acetate; EGDA Ethylene Glycol Diacetate; IPGA Isopropyl glycol acetate; IS AC isoamyl acetate.
- Glycerol esters: GDA - Diacetin: Glycerol diacetate; GTA - Triacetin: Glycerol triacetate; PRIACETIN™: Glycerol triacetate.
- Acetates of glycol ethers: BDGA (Diethylene glycol butyl ether acetate); 1,3 BGDA (1,3-butylene glycol diacetate); BGA (Monoethylene glycol butyl ether acetate); EDGA (Di ethylene glycol ethyl ether acetate); TEGDA (Triethylen-glycol diacetate).
- Citrates: TEC (Triethyl Citrate); ATEC (Acetyl Triethyl Citrate); DEC (Diethyl Citrate).
- Phthalates: DEP (Diethyl Phthalate); DMP (Dimethyl Phthalate).
- Maleates: DBM (Di-butyl Maleate); Dilynt EM (Diethyl Maleate); DOM (bis-2-ethylhexy Maleate).

Special Additives - Product Families typical properties

PRODUCT SERIES	APPLICATIONS	Boiling point	Melting point	Density 20°C (g/ml)	Flash point
Acetates					
2-Ethylhexyl Acetate (2 EHA)	Agrochemicals, inks, leathers, paints & coatings	199 °C	- 93 °C	0,87	88 °C
Ethylene Glycol Diacetate (EGDA)	Foundry, flavors & fragrances, paints & coatings, textile	110 °C	- 78 °C	1,10	88 °C
Isopropyl Glycol Acetate (IPGA)	Inks	164 °C	< - 40 °C	0,94	57 °C
Isoamyl Acetate (IS AC)	Flavors & fragrances, food, pharma	142 °C	- 78 °C	0,88	33 °C
Benzoates					
Methyl Benzoate (MB)	Flavors & fragrances, PVC stabilizers, textile	198 °C	- 12 °C	1,09	83 °C
Citrates					
Triethyl Citrate (TEC)	Flavors & fragrances, food, pharma	286 °C	- 40 °C	1,14	178 °C
Acetyl Triethyl Citrate (ATEC)	Cellulose acetate, flavors & fragrances	132 °C @ 1 mmHg	- 42 °C	1,14	187 °C
Diethyl Citrate (DEC)	Flavor & fragrances	-	-	1,22	-
Fumarates					
Di-(2-ethylhexyl) Fumarate (DOF)	Lubricants, paints & coatings	Decomposition at > 260 °C	- 48 °C	0,94	200 °C
Glyceryl Acetates					
Gycerol Diacetate (GDA Diacetin)	Adhesives, paints & coatings, flavors & fragrances, oilfield	260 °C	- 30 °C	1,19	110 °C
Gycerol Triacetate (GTA Triacetin)	Adhesives, filter tows, flavors & fragrances, food, foundry, inks, paints & coatings, paper, pharma, textile	259 °C	3,2 (supercools at about -78°C)	1,16	148 °C
Glycerol Triacetate, Various Grades (PRIACETIN ™)	Textile, cosmetics, tobacco, flavors & fragrances	259 °C	3,2 (supercools at about -78°C)	1,16	148 °C
Glycol Ethers Acetates					
Diethylene Glycol Butyl Ether Acetate (BDGA)	Lubricants, inks, paints & coatings	245 °C	- 32 °C	0,98	102 °C

PRODUCT SERIES	APPLICATIONS	Boiling point	Melting point	Density 20°C (g/ml)	Flash point
1,3-Butylene Glycol Diacetate (1,3-BGDA)	Foundry	222°C	< - 20 °C	1,04	95 °C
Monoethylene Glycol Butyl Ether Acetate (BGA)	Leather, paints & coatings, inks	192 °C	- 64 °C	0,94	79 °C
Di-(ethylene glycol) Ethyl Ether Acetate (EDGA)	Cosmetics, inks, paints & coatings	217 °C	- 25 °C	1,01	113 °C
Triethylen Glycol Diacetate (TEGDA)	Foundry	294,7 °C	- 57 °C	1,12	174 °C
Maleates					
Diethyl Maleate (Dilynt EM)	Chemical intermediate, solvents, insecticides	225 °C @ 99,5 KPa	- 22 °C	1,07	104,9 °C @ 99,5 KPa
Dibutyl Maleate (DBM)	Adhesives, solvents, chemical intermediate	280 °C	- 85 °C	1,00	121 °C (C.C.)
Di-(2-ethylhexyl) Maleate (DOM)	Lubricants, solvents, surfactants	202 °C @ 10 hPa	- 45 °C	0,94	160 °C
Phthalates					
Diethyl Phthalate (DEP)	Cellulose acetate, flavors & fragrances, cosmetics, pharma	297 °C	- 60 °C	1,12	170 °C
Dimethyl Phthalate (DMP)	Cellulose acetate, flavors & fragrances, peroxides, paints & coatings	283 °C	0/2 °C	1,19	154 °C
Succinates					
DMS	UV stabilizer, pigments	196 °C	22 °C	1,12	96 °C
DIPS	Pigments	228 °C	<- 40 °C	0,98	-
DES (Dilynt NAT/ES)	Pharma intermediates, cosmetics	217 °C	- 29 °C	1,04	98 °C
Dilynt-ES	Solvents	217 °C	- 29 °C	1,04	98 °C
DEAS	Agrochemicals	250 °C	<- 60 °C	1,08	153 °C
Hexahydrophthalates					
Diisobutyl hexahydrophthalate (DIBE)	Solvent, intermediate	312,7 °C	- 22 °C	0,99	167 °C

PRODUCT SERIES	APPLICATIONS	Boiling Point	Melting point	Density 20°C (g/ml)	Flash Point
Sebacates					
Dimethyl Sebacate (DMSE)	Chemical intermediate	284 - 288	23 - 38 °C	0,99	145 °C
Trimellitates					
Trimethyl Trimellitate (TMTM)	Cross-link agent, paints & coatings, textile, plasticizer for PVF Resins	194 °C @ 12 mmHg	37 °C	1,25	> 210 °C
Fatty Acid Esters Acetates					
Sorbitan Monooleate (SMO)	Lubricants, cosmetics	-	-	-	267 °C
Trimethylolpropane trioleate (TMPTO)	Lubricant	Ab. 300 °C (probable decomposition)	- 39 °C	0,90	324 °C
Salts					
KEH in acetone	Pharma	-	-	-	-
KEH in IPA	Pharma	83 °C	-	0,8	12
Potassium Acetate 70% Solution	Pharma	-	-	-	> 150 °C

PRODUCT SERIES	APPLICATIONS	Apperance	Viscosity @ 25°C mPa.s	Density @ 25°C g/ml
Methyltetrahydrophthalic Anhydride (MTHPA)				
THPA	Intermediate for UP Resins			
MTHPA NT	Multipurpose applications, useful in the field of electrical insulation	Clear Liquid	56	1,199
MTHPA TT	Low viscosity		30	1,120
MTHPA PI	Resistance to UV and atmospheric agents, similar to hydrogenated anhydrides		57	1,1641
MTHPA 604	Excellent performance/price ratio; electrical and composite applications		50	1,207
MTHPA NG	Wide range of applications, in particular insulation and composites		59	1,201
Methylendomethyltetrahydrophthalic Anhydride (METH or Methyl-Himic Anhydride)				
METH- E	Reference product recommended for applications in which thermal and electrical performances are required	Clear Liquid	237	1,229
METH- ES	Purer than METH-E. Less carbon dioxide formation and better colour retention when used with basic accelerators		230	1,239
Special Hydrogenated / Cycloaliphatic Anhydrides				
HHPA	Hardener for epoxy resins and intermediate for the production of alkyd resins. High yellowing resistance, suitable for outdoor applications (weathering resistance)	Solidif. point about 34,5 °C	47 @ 40°C	1,193 @ 40°C
MHHPA	Excellent mechanical and chemical properties properties in association with good colour retention	Clear Liquid	53	1,149
MHHPA WW	Outstanding colour retention even if heated for a long period at high temperature. Suitable for “high performance led”		53	1,149
MHHPA S-37	Impart good colour retention in general led lighting application		62	1,162
Anhydride 70 / 30	Excellent mechanical, electrical and chemical properties associated with good colour retention		76	1,188

For further information please contact us

PRODUCT SERIES	APPLICATIONS	Apperance	Viscosity @ 25°C mPa.s	Density @ 25°C g/ml
Succinic Anhydride	Intermediate for the manufacturing of alkyd resins, co-polymers, pharmaceuticals, chemical esters, starch modifiers, and as cross-linking agent in acrylic films	White Flakes Melting point 119 °C	-	-
Pre-accelerated and modified special anhydrides				
MTHPA 700 PL/N	High pressure pipes through filament winding technology	Clear Liquid	400	1,195
MTHPA NT/K1	Suitable for the production of electrical components		70	1,195
MTHPA 700 K3	Medium-high pressure pipes through filament winding technology		210	1,207

For further information please contact us

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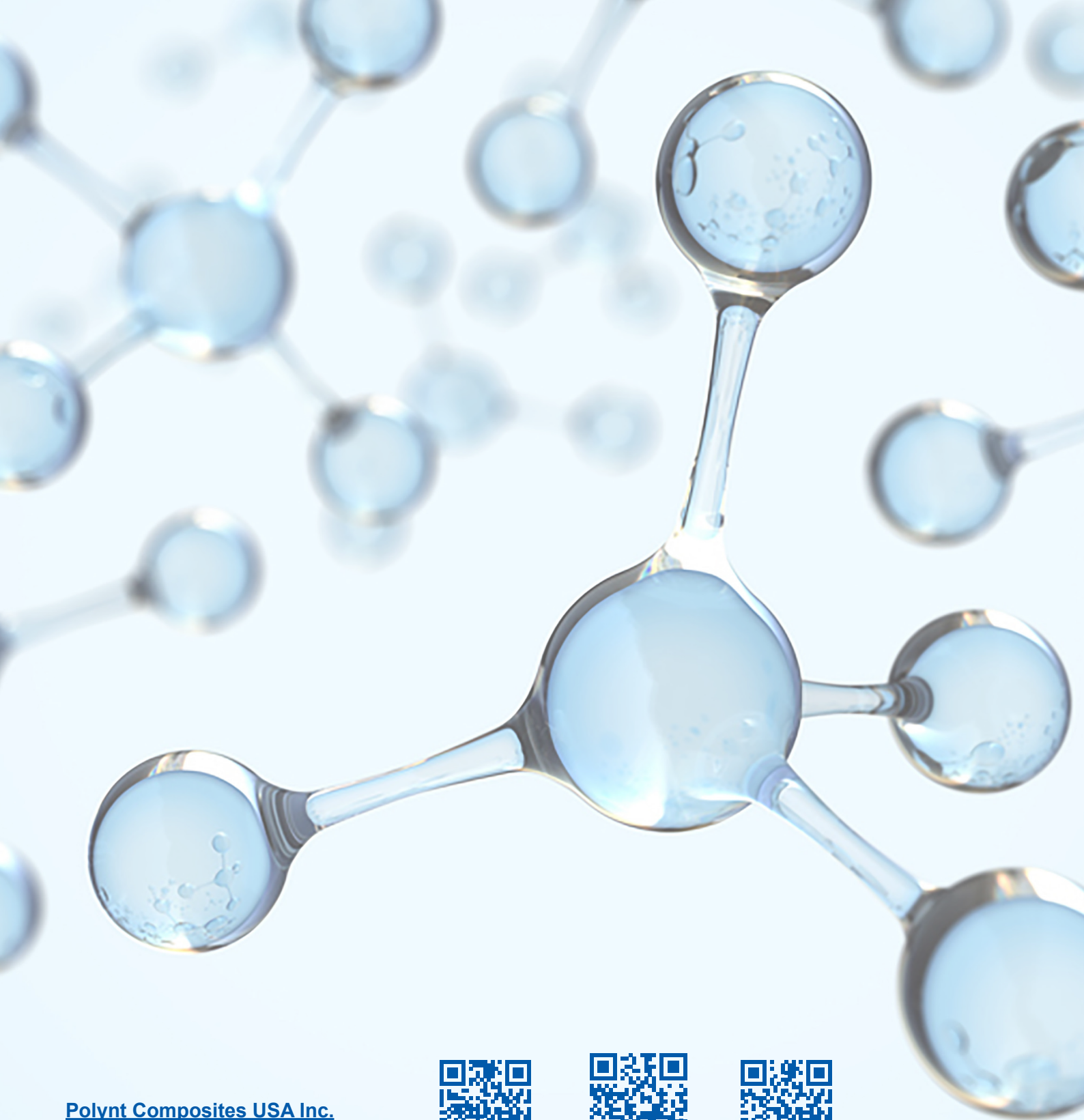

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