

Plasticizer Solutions

		Sales Specifications (Maximum Values)				Typical Properties			
		Color	Acid Value	Water Content	Average Molecular Weight	Specific Gravity	Appearance	Viscosity	Refractive Index
		Pt-Co Scale	mg KOH/g	%	g/mol	@25/25 C		cS@25 C	@25 C
Phthalate Esters									
Branched	Synplast DOP-N	25	0.07	0.10	390	0.9830	Clear Liquid	58	1.4852
	Synplast DINP (N/E)	25	0.07	0.10	415	0.9740	Clear Liquid	58	1.4860
Linear	Synplast 901P (N/E)	50	0.10	0.10	450	0.9580	Clear Liquid	50	1.4820
	Synplast DUP-E	50	0.10	0.10	474	0.9510	Clear Liquid	55	1.4810
Adipate Esters									
Branched	Synplast DOA-N	25	0.10	0.10	370	0.9240	Clear Liquid	12	1.4450
	Synplast DOA-FDA	25	0.10	0.05	370	0.9240	Clear Liquid	12	1.4450
	Synplast DINA-N	25	0.07	0.10	400	0.9200	Clear Liquid	17	1.4485
	Synplast DIDA-E	25	0.35	0.10	426	0.9180	Clear Liquid	24	1.4500
Trimellitate Esters									
Branched	Synplast TOTM (N/E)	100	0.02 as % TMA	0.10	547	0.9880	Clear Liquid	191	1.4832
	Synplast TINTM-E	100	0.02 as % TMA	0.10	589	0.9780	Clear Liquid	330	1.4840
Linear	Synplast 810TM-E	100	0.02 as % TMA	0.10	591	0.9730	Clear Liquid	114	1.4820
	Synplast NOTM-E	100	0.02 as % TMA	0.10	547	0.9830	Clear Liquid	111	n/d
	Synplast NOTM-PPC	100	0.02 as % TMA	0.10	547	0.9830	Clear Liquid	111	n/d
Azelate Esters									
	Synplast DOZ-E	500	0.35	0.10	413	0.9150	Clear Liquid	17	1.4460
Sebacate Esters									
	Synplast DOS-N	50	0.10	0.10	427	0.9130	Clear Liquid	19	1.4500

N - no antioxidant present

E - contains 0.10-0.15 wt % antioxidant (1,1,3-tris [2-methyl-4-hydroxy-5-t-butyl phenyl] butane)

PRODUCTS	TERMINATION	AVERAGE MOLECULAR WEIGHT (g·mol ⁻¹)	GRADES AVAILABLE	COMPATIBILITY LIMIT (PHR)	LOWER TEMPERATURE LIMIT (°C)	UPPER TEMPERATURE LIMIT (°C)	AMOUNT FOR 1500 PSI MODULUS (PHR)
Phthalates							
Synplast DOP	2-ethylhexanol (C8)	390.6	N	> 100	-39	60	54
Synplast DINP	isononanol (C9)	418.6	N, E	< 85	-37	75	
Synplast 901P	C9 + C10 + C11	449.4	N, E	< 85	-48	90	
Synplast DUP	C11	474.7	E	< 85	-52	105	
Adipates							
Synplast DOA	2-ethylhexanol (C8)	370.6	N	< 85	-60	60	44
Synplast DINA	isononanol (C9)	398.6	N	< 85	-60	60 / 75	
Synplast DIDA	isodecanol (C10)	426.7	E	~ 75	-60	75	46
Trimellitates							
Synplast TOTM	2-ethylhexanol (C8)	546.8	N, E	< 85	-33	105	56
Synplast TINTM	isononanol (C9)	588.9	E	~ 75	-35	105	
Synplast NOTM	n-octanol (C8)	546.8	E	~ 75	-44	105	
Synplast 810TM	n-C8 + n-C10	590.6	E	~ 75	-44	105	58
Sebacate							
Synplast DOS	2-ethylhexanol (C8)	426.7	N, E	~ 70	-65	75	45
Azelates							
Synplast DOZ	2-ethylhexanol (C8)	412.7	E	~ 70	-65	75	

Comparative data for reference

Upper Temperature Limit - this refers specifically to Wire & Cable rating, and is meant to illustrate its accelerated aging properties

PolyOne produces a complete line of both linear and branched esters that are phthalate, adipate, trimellitate, azelate and sebacate based. PolyOne provides excellent customer service, high product quality, very competitive pricing, and technical assistance in choosing the best plasticizer for the application targeted.

PolyOne Corporation's product benefits

- Rigid manufacturing specifications
- Complies with quality standards across industries
- Non-phthalate options available
- FDA compliant grades
- CPSIA compliant grades

PolyOne's synthetic esters: applications and resins

Applications/Industries

- Construction
- Wire & cable
- Extruded profiles
- Fencing
- Geomembranes
- Automotive interior & exterior trim
- Adhesives
- Rubber products
- Plastics
- Calendered & extruded films
- Lubricant basestocks

Resins

- PVC
- Urethane
- Rubber
- Epoxy



Product choices often vary by region due to differences in regulatory and agency requirements, availability and other key factors. Please contact your nearest sales office for assistance in choosing the right solution for your locale.

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