

Plasticizers

This Range Chart covers our plasticizer brands:

Palatinol®
Plastomoll®
Hexamoll®
Palamoll®

This chart includes our short-chain phthalate, Palatinol® M, which, though unsuitable for PVC, is important as plasticizer for coatings and cellulose moulding compounds.

All the figures quoted are intended solely as a guide and are not binding for the properties of the products that we place on the market. The definitive product specifications for our plasticizers are published in the "Technical Information" for the individual products.

If you should have any technical problems, you can rest assured of our full cooperation in solving them.

Contact our Technical Service Plasticizers:

E-Mail: plasticizers.europe@basf.com

The data given in the range chart apply to the formulation quoted. The properties of the final product can be adapted to meet specific requirements by blending it with additives such as lubricants, stabilizers and antioxidants.

Product line	Product data												
	Name of product	Abbreviation DIN EN ISO 1043-3	CAS number	Dyn. Viscosity 20 °C [mPa · s] ASTM D 7042 DIN 53019	Density at 20 °C [g/cm ³] DIN 51757	Refractive index n_D^{20} DIN 51423-2	Pt/Co colour DIN EN ISO 6271	Acid value [mg KOH/g] DIN EN ISO 2114	Ester content [% area] GC	Water content [% weight] DIN 51777, Part 1	Pour point [°C] DIN ISO 3016	Solution temp. [°C] DIN 53408	Solution temp. [°C] rheological BASF method
Palatino® products (phthalates)													
Palatino® N*	DINP	28553-12-0		68 – 82	0.970 – 0.977	1.484 – 1.488	≤ 30	≤ 0.06	≥ 99.5	≤ 0.05	-54	132	124
Palatino® 10-P*	DPHP	53306-54-0		115 – 130	0.960 – 0.965	1.482 – 1.485	≤ 40	≤ 0.07	≥ 99.5	≤ 0.05	-48	146	137
Palatino® M	DMP	131-11-3		16 – 19	1.190 – 1.194	1.515 – 1.516	≤ 10	≤ 0.04	≥ 99.5	≤ 0.1	-42**	-	-
Plastomoll® products (adipates)													
Plastomoll® DOA	DOA/DEHA	103-23-1		13 – 15	0.924 – 0.926	1.446 – 1.448	≤ 20	≤ 0.07	≥ 99.5	≤ 0.1	< -60	148	134
Plastomoll® DNA	DINA	33703-08-1		17 – 21	0.918 – 0.922	1.448 – 1.451	≤ 40	≤ 0.07	≥ 99.5	≤ 0.1	< -60	156	145
Hexamoll® products (cyclohexane-1,2-dicarboxylate)													
Hexamoll® DINCH	-	166412-78-8 474919-59-0		44 – 60	0.944 – 0.954	1.460 – 1.466	≤ 40	≤ 0.07	≥ 99.5	≤ 0.1	-54	151	140
Palamoll® products (polyesters of aliphatic dicarboxylic acids)													
Palamoll® 632	-	55799-38-7		2000 – 3500	1.140 – 1.150	1.462 – 1.464	≤ 150	≤ 2	-	≤ 0.05	-16	162	155
Palamoll® 638	-	82904-80-1		7000 – 9500	1.110 – 1.130	1.466 – 1.468	≤ 150	≤ 2	-	≤ 0.05	-9	164	158
Palamoll® 646	-	150923-12-9		10000 – 13000	1.125 – 1.140	1.469 – 1.471	≤ 150	≤ 2	-	≤ 0.05	-17	162	151
Palamoll® 652	-	208945-13-5		1800 – 2300	1.040 – 1.060	1.462 – 1.467	≤ 150	≤ 1.5	-	≤ 0.05	-25	149	142
Palamoll® 654	-	208945-12-4		4500 – 5500	1.070 – 1.085	1.468 – 1.470	≤ 150	≤ 1.5	-	≤ 0.05	-18	150	142
Palamoll® 656	-	208945-12-4		10000 – 13000	1.085 – 1.105	1.469 – 1.472	≤ 150	≤ 1.5	-	≤ 0.05	-10	154	145

* These products can also be supplied in a form stabilized with 0.25 % Irganox® 1010.

** With seed crystals, crystallization may start earlier.

Product line Properties of plasticized PVC***

Name of product	Abbreviation DIN EN ISO 1043-3	CAS number	Tensile stress at break (σ _B) [MPa] DIN EN ISO 527, Part 1; 3 (23 °C)	Tensile strain at break (ε _B) [%] DIN EN ISO 527, Part 1; 3 (23 °C)	100 % modulus (σ ₁₀₀) [MPa] DIN EN ISO 527, Part 1; 3 (23 °C)	Brittleness temperature [°C] BASF- Method similar to former DIN 53372	DMA, T _g [°C] at Max. Loss Modulus G'' ISO 6721-7	Shore A Hardness DIN EN ISO 868 23 °C, 7 d conditioned	Efficiency Factors at Shore A = 75 DOP = 1	Volatility [%] after 24 h at 130 °C BASF Method
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Palatinol® products (phthalates)

Palatinol® N*	DINP	28553-12-0	17.5	370	6.0	-42	-40	73	1.06	1.3
Palatinol® 10-P*	DPHP	53306-54-0	18	360	6.8	-35	-39	77	1.14	1.2

Plastomoll® products (adipates)

Plastomoll® DOA	DOA/DEHA	103-23-1	14.5	400	4.7	-67	-70	69	0.95	10
Plastomoll® DNA	DINA	33703-08-1	14	380	5.3	-71	-72	72	1.04	3

Hexamoll® products (cyclohexane-1,2-dicarboxylate)

Hexamoll® DINCH	-	166412-78-8 474919-59-0	17	360	6.4	-43	-45	75	1.11	2.4
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Palamoll® products (polyesters of aliphatic dicarboxylic acids)

Palamoll® 632	-	55799-38-7	22.5	360	8.1	-22	-17	80	1.24	1
Palamoll® 638	-	82904-80-1	23	360	8.7	-14	-13	80	1.24	0.6
Palamoll® 646	-	150923-12-9	22	360	7.6	-24	-16	77	1.15	0.6
Palamoll® 652	-	208945-13-5	20	360	6.6	-20	-17	75	1.10	0.7
Palamoll® 654	-	208945-12-4	20	360	6.9	-21	-16	75	1.09	0.6
Palamoll® 656	-	208945-12-4	21	360	7.4	-21	-12	76	1.12	0.5

* These products can also be supplied in a form stabilized with 0.25 % Irganox® 1010.

*** Plasticized PVC formulation

100 phr Inovyn™ 271 PC (Inovyn™ is a trademark of Inovyn ChlorVinyls Ltd)

67 phr Plasticizer

2 phr Reagens SLX781; liquid Ba/Zn stabilizer

Test Capability	Test Method	Instrument Model	Testing Description
Viscosity	ASTM D 7042	Anton Paar	Stabinger Viscometer
	DIN 53019	Anton Paar	MCR 101 Rheometer
Density	DIN 51757	Paar DMA 48 Dig. Density Meter	Mechanical Oscillator
Refractive index	DIN 51423	Atago/Kuebler	Abbe-Refractometer
Platinum-cobalt colour	DIN EN ISO 6271	Lange Lico 400	Comparison with platinum-cobalt standards
Ester content	BASF-Method	Gas chromatography	FID-Detector
Water content	DIN 51777, Part 1	Metrohm E 547 K.F. Titrator	Direct determination
Acid value	DIN EN ISO 2114	Metrohm Titrande	Direct titration
Solution temperature at clear point	DIN 53408	Leitz Microscope, Mettler Heating-Unit	5 % S-PVC, K-value 71 in plasticizer
Mechanical properties	BASF-Method	Anton Paar	MCR 302 Rheometer
	DIN EN ISO 527, Part 1 and 3	Zwick BZ2.5/TH1S	23 °C, 0.5 mm pressed plaques Clamp speed 100 mm/min
Brittleness temperature	BASF-Method	Heraeus Voetsch test-chamber	Falling weight method
Dynamic mechanical analysis	ISO 6721-7	Rheometrics RDA 2	Temperature at + 20 °C to -100 °C, 40 x 20 x 0.5 mm test specimen, Frequency 1 Hz
Shore hardness	DIN EN ISO 868	Hildebrand Digital Durometer	10 mm test specimen, readings 15 seconds
Volatility	BASF-Method	Heraeus-oven, controlled air flow with rotating rack	24 h at 130 °C, approx. 18 airchanges per h

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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