

Range Chart

TI/N-CPN/IP Range Chart
October 2022

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Supersedes edition dated November 2021

Petrochemicals Plasticizers



Plasticizers

This Range Chart, updated in October 2022, covers our portfolio of plasticizers:

Palatinol®
Plastomoll®
Hexamoll®
Palamoll®

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 Datasheets for the individual products.

If you have any technical questions, please feel free to contact our Technical Support Team.

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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.

Plasticizers – Typical Product Data

BASF Product Name	Generic Name	CAS Number	Absolute Viscosity at 20 °C [cP] ASTM D445	Absolute Viscosity at 25 °C [cP] ASTM D445	Specific Gravity at 20/20 °C ASTM D4052	Specific Gravity at 25/25 °C ASTM D4052	Density at 20 °C [g/cm³]	Refractive Index nD20 ASTM D1045	Color, APHA [Pt-Co] ASTM D5386	Acid Value [mg KOH/g] ASTM D1045	Ester Content [% area] ASTM D3465	Water Content [% by weight] ASTM E203	Pour point [°C] ASTM D97	Solution temp. Clear Point [°C] BASF method	Volatiles, [wt%] ASTM D2369, 1hr @ 110 °C	Flash Point, COC, [°C] ASTM D92
Palatino® Products (Terephthalate)																
Palatino® DOTP	DOTP	8422-86-2	86	63	0.984	0.981	0.982	1.488	≤ 25	≤ 0.1	≥ 99.6	≤ 0.1	< -45	146	0.49	232
Hexamoll® Products (Cyclohexane-1,2-dicarboxylate)																
Hexamoll® DINCH	DINCH	474919-59-0	52	39	0.949	0.947	0.948	1.463	≤ 40	≤ 0.07	≥ 99.5	≤ 0.1	-54	150	0.65	224
Palatino® Products (Phthalates)																
Palatino® DPHP	DPHP	53306-54-0	119	86	0.964	0.960	0.962	1.484	≤ 25	≤ 0.07	≥ 99.5	≤ 0.1	< -45	141	0.25	232
Palatino® 911P	911P	68515-43-5	61	45	0.959	0.959	0.959	1.485	≤ 50	≤ 0.07	≥ 99.6	≤ 0.1	-20	135	0.15	227
Palatino® 111P-I	DUP	3648-20-2	64	50	0.954	0.951	0.952	1.481	≤ 50	≤ 0.07	≥ 99.6	≤ 0.1	0	149	0.13	254
Palatino® Products (Trimellitates)																
Palatino® TOTM	TOTM	3319-31-1	292	207	0.991	0.987	0.989	1.485	≤ 100	≤ 0.1	≥ 99.0	≤ 0.1	< -45	141	0.14	250
Palatino® 810TM	810TM	68130-50-7	137	104	0.975	0.972	0.974	1.484	≤ 100	≤ 0.1	≥ 99.0	≤ 0.1	-44	154	0.3	266
Plastomoll® Products (Adipates)																
Plastomoll® DOA	DOA	103-23-1	14	11	0.927	0.925	0.926	1.446	≤ 25	≤ 0.1	≥ 99.6	≤ 0.1	-75	144	2.41	199
Plastomoll® DNA	DINA	33703-08-1	20	17	0.923	0.920	0.922	1.448	≤ 25	≤ 0.1	≥ 99.6	≤ 0.1	-68	154	0.81	215
Palamol® Products (Polyesters of aliphatic dicarboxylic acids)																
Palamol® 652	652	208945-13-5	1940	1340	1.059	1.054	1.057	1.463	≤ 150	≤ 1.5	-	≤ 0.1	-25	152	0.89	252
Palamol® 654	654	208945-12-4	4910	3430	1.085	1.079	1.083	1.467	≤ 150	≤ 1.5	-	≤ 0.1	-18	156	0.68	288
Palamol® 656	656	208945-12-4	11400	7950	1.095	1.093	1.093	1.468	≤ 150	≤ 1.5	-	≤ 0.1	-10	158	0.54	274

Plasticizers – Properties of Plasticized PVC*

BASF Product Name	Generic Name	CAS Number	Tensile Strength [psi] ASTM D638	Ultimate Elongation [%] ASTM D638	100% Modulus [psi] ASTM D638	Brittleness Temp., Tb [°C] ASTM D746	Torsional stiffness, Tf [°C] ASTM D1043	Shore A Hardness at 23°C (15 seconds) ASTM D2240	Shore D Hardness at 23°C (15 seconds) ASTM D2240	Volatility, 24 h at 100°C [% Weight] ASTM D1203	Volatility, 24 h at 130°C [% Weight] ASTM D1203	Humid Compatibility, 4 wks at 100% humidity [% weight] ASTM D2383	Efficiency Factor at Shore A = 75 DOP = 1
Palatinol® Products (Terephthalate)													
Palatinol® DOTP	DOTP	8422-86-2	2230	430	940	-44	-36	69	17	2.0	23.2	0.9	1.08
Hexamoll® Products (Cyclohexane-1,2-dicarboxylate)													
Hexamoll® DINCH	DINCH	474919-59-0	2150	340	1110	-46	-44	73	19	2.3	29.5	0.3	1.10
Palatinol® Products (Phthalates)													
Palatinol® DPHP	DPHP	53306-54-0	2240	420	1050	-37	-37	71	20	1.0	15.5	0.7	1.11
Palatinol® 911P	911P	68515-43-5	2310	410	1080	-49	-48	71	20	0.4	3.9	1.6	1.07
Palatinol® 111P-I	DUP	3648-20-2	2050	410	980	-49	-48	72	19	0.3	2.5	1.7	1.16
Palatinol® Products (Trimellitates)													
Palatinol® TOTM	TOTM	3319-31-1	2460	400	1350	-34	-28	72	22	0.2	0.5	0.8	1.14
Palatinol® 810TM	810TM	68130-50-7	2240	390	1250	-45	-43	76	24	0.2	0.6	1.5	1.15
Plastomoll® Products (Adipates)													
Plastomoll® DOA	DOA	103-23-1	1860	460	735	-67	-62	65	16	17.7	38.0	1.6	0.95
Plastomoll® DNA	DINA	33703-08-1	1910	430	810	-68	-64	68	16	3.8	34.2	1.1	1.00
Palamoll® Products (Polyesters of aliphatic dicarboxylic acids)													
Palamoll® 652	652	208945-13-5	2250	410	1020	-21	-17	71	21	0.9	2.8	0.8	1.10
Palamoll® 654	654	208945-12-4	2210	410	970	-22	-17	70	20	0.5	1.5	0.8	1.06
Palamoll® 656	656	208945-12-4	2450	430	1110	-25	-16	70	21	0.4	0.9	0.6	1.10

* Formulation: 100 phr PVC Oxy 225 P, 70 phr Plasticizer, 3 phr Stabilizer Baerlocher 1760 A

Plasticizers – Liquid Extraction of Plasticized PVC*

BASF Product Name	Generic Name	CAS Number	Deionized Water 7 days at 70 °C, [%]	Soapy Water (1% Ivory) 7 days at 70 °C, [%]	Tenside Water (0.1% Alconox) 7 days at 70 °C, [%]	Ethanol (90%) 7 days at 23 °C, [%]	Hexanes, HPLC grade 7 days at 23 °C, [%]	Aromatic Oil (Sundex 790TN) 7 days at 23 °C, [%]	Aliphatic Oil (ASTM IRM 905) 7 days at 23 °C, [%]	ASTM IRM 902 Oil 7 days at 23 °C, [%]	Olive Oil 7 days at 23 °C, [%]	Unleaded Gasoline 7 days at 23 °C, [%]	Diesel 7 days at 23 °C, [%]
Palatinol® Products (Terephthalate)													
Palatinol® DOTP	DOTP	8422-86-2	1.3	+1.3‡	0.8	30.6	37.2	4.1	12.5	6.2	22.3	25.8	27.7
Hexamoll® Products (Cyclohexane-1,2-dicarboxylate)													
Hexamoll® DINCH	DINCH	474919-59-0	0.4	+0.2	0.1	33.1	33.4	7.2	18.9	11.7	22.0	26.2	27.7
Palatinol® Products (Phthalates)													
Palatinol® DPHP	DPHP	53306-54-0	0.9	+3.4	0.3	32.5	33.0	2.6	12.7	6.0	21.1	25.5	27.6
Palatinol® 911P	911P	68515-43-5	1.4	+3.5	0.8	32.4	32.8	8.2	18.9	13.6	21.5	27.1	27.4
Palatinol® 111P-I	DUP	3648-20-2	1.6	+3.8	0.9	32.7	33.0	8.6	16.1	15.5	20.0	29.0	26.2
Palatinol® Products (Trimellitates)													
Palatinol® TOTM	TOTM	3319-31-1	1.1	+3.7	0.7	30.1	32.6	0.0	5.4	1.8	22.0	23.4	27.3
Palatinol® 810TM	810TM	68130-50-7	1.4	+3.3	1.0	36.1	35.0	2.4	12.7	11.5	17.9	30.1	26.1
Plastomoll® Products (Adipates)													
Plastomoll® DOA	DOA	103-23-1	1.4	15.9	0.9	32.5	37.7	18.0	11.0	19.0	24.8	27.6	27.0
Plastomoll® DNA	DINA	33703-08-1	1.7	6.2	1.2	33.6	36.4	19.4	24.4	22.7	22.1	29.7	27.6
Palamol® Products (Polyesters of aliphatic dicarboxylic acids)													
Palamol® 652	652	208945-13-5	1.2	4.1	1.7	9.2	4.5	0.5	1.1	0.8	2.0	18.2	+2.2
Palamol® 654	654	208945-12-4	1.2	4.0	1.7	9.1	1.8	0.0	0.6	0.3	1.8	11.6	+2.8
Palamol® 656	656	208945-12-4	1.0	2.2	1.5	5.5	+0.3	+0.4	0.3	0.1	1.1	6.7	+3.4

* Formulation: 100 phr PVC Oxy 225 P, 70 phr Plasticizer, 3 phr Stabilizer Baerlocher 1760 A
 ‡ A + value indicates a weight gain.

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