



Printing ink distillates

PKWF, PRINTOSOL, ESTISOL

For further information, please visit our website at
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Products and Markets

Haltermann Products, a wholly owned subsidiary of The Dow Chemical Company, offers an ideal combination of decades of experience in the field of multiphase fractional distillation and production of specialites, coupled with the benefits and the global presence of a corporate organisation. A high level of customer orientation and flexibility ensures our customers receive skilled assistance and attention at all times.

As the first European producer of printing ink oils with narrowly defined boiling ranges we have optimised our raw material selection specifically for the particular requirements of the printing ink industry.

PKWF, PRINTOSOL and ESTISOL printing ink oils are the result of many years' successful cooperation with Europe's leading printing ink and resin manufacturers. The product range is constantly being extended and further developed in accordance with market requirements. A high level of consistent quality is the hallmark of our products.



Haltermann
PRODUCTS

PKWF, PRINTOSOL, ESTISOL

Printing ink distillates Typical properties	Distillation range at 1013 kPa, °C ISO 3405/ ASTM D 86	Density at 15 °C kg/m ³ ISO 12185/ ASTM D 4052	Aromatic content % w/w IR/UV-spectroscopy	Carbon-type composition DIN 51378/ASTM D 2140			Aniline Point °C DIN ISO 2977/ ASTM D 611	Refractive index n _D ²⁰ DIN 51423-2	Kauri-Butanol-value ASTM D 1133	Kinematic viscosity mm ² /s (cSt) at 20 °C DIN EN ISO 3104/ ASTM D 445	Bromine number g Br/100 g DIN 51774-1/ ASTM D 1159	Flash point °C P.M. DIN EN 22719/ ASTM D 93	Pour point °C DIN ISO 3016/ ASTM D 97	Color	Printing ink distillates Typical properties
				CA %	CN %	CP %									
PKWF 1/3 af	190-240	750	< 0.1	< 1	< 1	99	84	–	1.9	< 1	> 65	< – 15	clear water white	PKWF 1/3 af	
PKWF 4/7	240-270	824	20	12	22	66	72	29	3.7	< 1.0	> 100	– 18	virtually water white	PKWF 4/7	
PKWF 4/7 af new	240-270	804	~ 1	< 1	25	74	84	25	3.8	< 0.5	> 100	– 12	virtually water white	PKWF 4/7 af new	
PRINTOSOL 4/7 ar	240-270	870	45	23	20	57	40	50	3.8	< 1.0	> 100	< – 27	pale yellow	PRINTOSOL 4/7 ar	
PKWF 6/9	260-290	830	20	12	22	66	76	27	5.2	< 1.0	> 110	– 18	virtually water white	PKWF 6/9	
PKWF 6/9 af new	260-290	805	~ 1	< 1	25	74	90	23	5.1	< 0.5	> 110	– 9	virtually water white	PKWF 6/9 af new	
PRINTOSOL 6/9 ar	260-290	875	50	25	20	55	45	50	5.6	< 1.0	> 110	< – 24	yellow	PRINTOSOL 6/9 ar	
PKWF 28/31	280-310	835	20	12	22	66	82	26	7.6	< 1.0	> 120	– 9	yellow	PKWF 28/31	
PKWF 28/31 af new	280-310	812	~ 1	< 1	25	74	93	22	7.4	< 0.5	> 120	– 6	pale yellow	PKWF 28/31 af new	
PRINTOSOL 28/31 ar	280-310	882	50	25	20	55	50	50	8.7	< 1.0	> 120	– 21	yellow	PRINTOSOL 28/31 ar	
PRINTOSOL C 800	260-310	840	22	11	23	66	73	28	5.8	< 1.0	> 100	– 15	yellow	PRINTOSOL C 800	
PRINTOSOL 280/345 ar	280-350	888	50	25	24	51	45	–	10	< 1.0	> 120	– 28	yellow	PRINTOSOL 280/345 ar	
PRINTOSOL 280/340 AP 65	280-340	864	33	17	23	60	65	–	9	< 1.0	> 120	– 18	yellow	PRINTOSOL 280/340 AP 65	
PRINTOSOL 280/360 AP 65	280-360	874	36	18	24	58	65	–	13	< 1.0	> 120	– 9	amber	PRINTOSOL 280/360 AP 65	
PRINTOSOL 30/40 AP 85	310-390	860	20	12	22	66	85	25	15.9	< 1.5	> 140	+ 9	brown	PRINTOSOL 30/40 AP 85	
ESTISOL 242	270-280	858	–	–	–	–	– 17	66	4.5	< 1.0*	138	– 12	20 (APHA)	ESTISOL 242	
ESTISOL 256	265-280	863	–	–	–	–	– 20	73	4.4	< 1.0*	144	< – 30	20 (APHA)	ESTISOL 256	
ESTISOL 300	320-355	882	–	–	–	–	< – 10	61	7.3	100 – 120*	180	– 12	2 (ASTM D150)	ESTISOL 300	
ESTISOL 312	300-320	863	–	–	–	–	– 18	47	8.7	< 1.0*	172	– 30	20 (APHA)	ESTISOL 312	
ESTISOL 390	n.a.	870	–	–	–	–	3	–	16	45*	> 100	– 12	yellow	ESTISOL 390	
Test oil														Test oil	
6/9, 6/9 af new, 6/9 af 6/9, 6/9 ar blend, 6/9 ar	Precipitation temperature measurement as a quality criterion of Printing Ink Resins										Precipitation temperature measurement as a quality criterion of Printing Ink Resins			6/9, 6/9 af new, 6/9 af 6/9, 6/9 ar blend, 6/9 ar	
	Determination of varnish viscosity for quality control of Printing Ink Resins										Determination of varnish viscosity for quality control of Printing Ink Resins				

*Iodine value (DGF CV11d): g I₂/100g

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Our extensive range of PKWF™ and PRINTOSOL™ products offers formulation components for all types of heatset, sheetfed and coldset applications. Narrowly defined distillation ranges allow maximum control at the drying stage. The broad solvent power spectrum, expressed in terms of aniline points is ranging from the strong solvent Printosol AR to the less compatible PKWF AF NEW. This provides the flexibility essential to addressing the various mineral oil tolerances of printing ink resins.

ESTISOL™ are products for printing ink applications based primarily on renewable resources. With narrow boiling ranges these low-odour ester oils perfectly complement the mineral oil based printing ink oils. Customer-specific grades are also possible on request.

All products are available in drums and in bulk. Other packaging is available on request.

Specific test oils in the boiling range of 260–290 °C have been developed together with leading resin and printing ink manufacturers in the Eurocommit working group. Test oils are used within the framework of the Eurocommit methods for the measurement of precipitation temperature and varnish viscosity. For the first time they offer the industry the possibility of using consistent standards for the quality control of printing ink resins both by the manufacturer during production and by the user.

Prior to using the PKWF, PRINTOSOL and ESTISOL products, please refer to the relevant safety data sheet or consult your local contact.

Accreditation to DIN EN ISO 9000