

We hereby confirm that LumiArt and LumiSilk papers produced at Oulu Mill Finland are acid free papers (pH 8,2 $\pm$ 0,2) and made by using ECF chemical pulp.

STORA ENSO FINE PAPER
Oulu Mill
Technical Customer Services



MediaPrint Silk

PAPER FOR IMAGES AND GRAPHICS



MediaPrint Silk sheet grade is a woodfree, multicoated silk matt art paper and board for all kinds of colour printing. Its nonreflecting high smooth surface offers superior print and gloss contrast.

TEXT/IMAGE

An ideal choice of paper for demanding images and legibility.

REPRO

Normally the paper does not set the limit. Typical screen rulings are 74 and 80 lines/cm (200lines/inch).

PRINTING PROCESSES

Sheet fed offset.

BINDING PROCESSES

Thread, wire and adhesive binding. Precreasing is recommended when folding grammages of 170 g/m² and higher.

SURFACE TREATMENT

Varnishing and laminating can be used.

RANGE

Various sizes are available in grammages from 90 to 350 g/m².

AGEING RESISTANCE

Ageing resistance according to ISO 9706:1994 is created with chemical bleached pulp, the neutral pH value and the alkaline filler.

QUALITY SYSTEM

The quality system of the mill is approved according to ISO 9001.

HEALTH AND ENVIRONMENT

This paper is approved for contact with dry and non-fatty foods according to BgVV's (rec. XXXVI) and KTM's (143/93) regulations.

The environmental system of the mill is approved according to ISO 14001 and EMAS.

Nordic Environmental Product Declaration (EPD) is available upon request.

Production target values

Details and concrete supplier conditions are subject to the contract.

Grammage g/m ²	Bulk cm ³ /g	Whiteness CIE with D65/10 %	Brightness with D65/10 %	Opacity with D65/10 %	Gloss Tappi 75 %	Surface Roughness PPS 1.0 µm
ISO 536 DIN 53104	ISO 536:1995 SCAN-P6:75	ISO 11475 SCAN-P66:93	mod. ISO 2470 Modified SCAN-P3:93	ISO 2471 Modified SCAN-P8:93	ISO/DIS 8245/1 T480 cm-92	DIN ISO 8791-4 SCAN-P76:95
90	0.90	122	99	93	30	2.0
100	0.90	122	99	94	20	2.0
115	0.84	122	99	94.5	30	1.4
118	0.87	122	99	95	30	1.4
130	0.83	122	99	95	30	1.3
150	0.83	122	99	96.5	30	1.3
170	0.85	122	99	97	30	1.3
200	0.87	122	99	98	30	1.3
216	0.89	122	99	99	30	1.3
250	0.83	122	99	99	30	1.7
300	0.88	122	99	99	30	2.0
350	0.90	122	99	99	30	2.2

Updated 18.06.04



MediaPrint Gloss

PAPER FOR IMAGES AND GRAPHICS



MediaPrint Gloss is a woodfree, fully coated quality paper for extremely demanding graphic image printing.

TEXT/IMAGE

Glossy papers are ideal for high quality image reproduction. When printing large text areas consider using LumiSilk to get a better legibility.

REPRO

Normally the paper does not set the limit. Typical screen rulings are 74 and 80 lines/cm (200 lines/inch).

PRINTING PROCESSES

Sheet fed offset, letterpress and silk screen.

BINDING PROCESSES

Thread, wire and adhesive binding. Precreasing is recommended when folding grammages of 170 g/m² and higher.

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The mills are EMAS registered and ISO 14001 certified.

Production target values (OU UE)

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Grammage g/m ²	Bulk cm ³ /g	Whiteness CIE with D65/10 %	Brightness D65/10 %	Opacity with D65/10 %	Gloss TAPPI 75 %	Surface Roughness PPS 1.0
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90	0.8	122	99	91	70	0.9
100	0.8	122	99	93	70	0.9
104	0.85	122	99	93.5	67	0.9
115	0.78	122	99	94	70	0.7
118	0.8	122	99	94	67	0.7
130	0.78	122	99	95	70	0.7
150	0.78	122	99	96.5	70	0.7
170	0.78	122	99	98.5	70	0.7
200	0.81	122	99	98.5	70	0.7
216	0.81	122	99	98.5	70	0.7
250	0.78	122	99	98.5	77	0.9
300	0.81	122	99	99	77	0.9
350	0.85	122	99	99	77	1.0

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Technical Customer Services



DET NORSKE VERITAS

MANAGEMENT SYSTEM CERTIFICATE

Combination Certificate

*This is to certify that
the Management and Operating System*

of

**STORA ENSO OYJ
FINE PAPER
OULU MILL**

Oulu, Finland

has been found to conform to the Management System Standards:

**ISO 9001:2000 according to FINAS Accredited Certificate No. 97-HEL-AQ-445
ISO 14001:1996 according to FINAS Accredited Certificate No. 98-HEL-AE-039
OHSAS 18001:1999 according to non-Accredited Certificate No. 1264-2002-HSO-DNV**

This Certificate is valid for the following product or service ranges:

**WOODFREE COATED ART PRINTING PAPERS AND BOARDS, BLEACHED SOFTWOOD AND
HARDWOOD PULPS, RECOVERED BY-PRODUCTS, HEAT AND POWER GENERATION.**

Place and date
Helsinki, 2003-03-04

This certificate is valid until
2006-05-31

for the Unit
DNV Certification OY/AB

Hans Fagerström
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this certificate invalid



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