



FS-200 and FS-300

UV-Curable Resins for Working Stamp for Photo Nanoimprint Lithography

PRODUCT DESCRIPTION:

- Base chemistry: acrylate, radical polymerization
- One component resin ready for use, solvent-free, UV curing

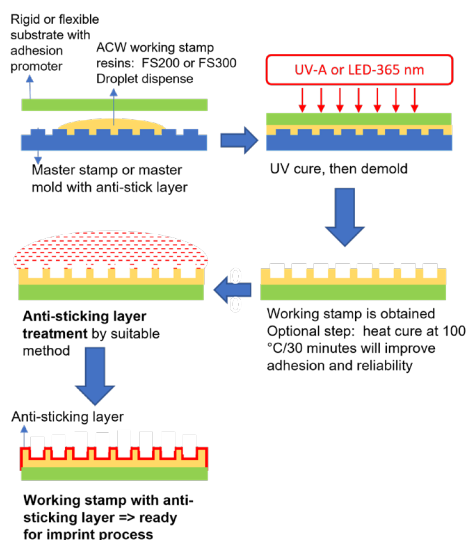
PRODUCT USE:

- UV-curable resin for working stamp for photo nanoimprint lithography

Features:

- High Tg and flexible
- Optically clear
- Excellent mechanical stability
- Solvent Free

Working stamp process flow:



APPLICATION NOTES:

Dispense process: droplet dispense or spin coating

Suggested layer thickness: 2 to 25 micron

UV CURING CONDITIONS:

*Metal halide / Mercury UV: UV-A (320-400 nm), intensity: 50-1,000 mW/cm²

Suggested curing conditions: 200 mW/ cm² x 100 sec

Atmosphere: cure between two substrates or in an inert atmosphere (oxygen-free)

*or LED-365 nm, UV light intensity: 100 to 1,000 mW/ cm²

Suggested curing conditions: 250 mW/ cm² x 100 sec

Atmosphere: cure between two substrates or in an inert atmosphere (oxygen-free)

Processing environment: process at temperature between 20 – 30 °C at relative humidity of 40-60% and process under yellow light.

Typical Properties:

Before cure (liquid)	FS-200	FS-300
Viscosity (cps, 25 °C)	350 - 450	250 - 350
Density (g/mL)	1.1	1.1
Shelf life (15 - 25 °C)	6 months	6 months
Working life (20 - 30 °C)	3 months	3 months
After curing - cured film	FS-200	FS-300
Volume shrinkage (%)	3	2
Tg (DMA, °C)	136	121
Young's Modulus (Gpa)	1.7	1.2
Elongation (%)	10	15
Contact angle of water in air (°)	85	80
Refractive index @ 589 nm	1.504	1.504

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Addison Clear Wave Coatings, Inc., 3555 Legacy Blvd, St. Charles, IL 60174 USA

Tel: +1 630-444-1658, Fax: +1 630-444-1683, www.AddisonCW.com

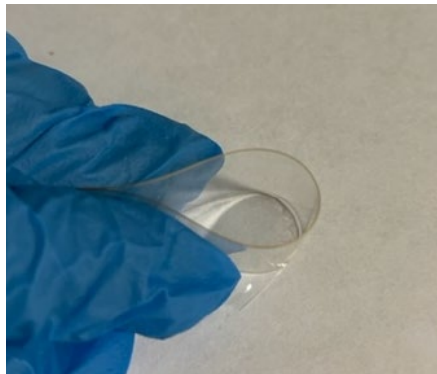
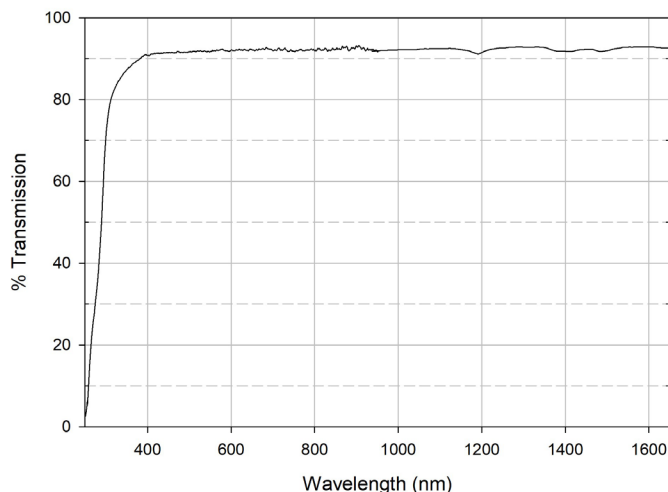


(FS-200 and FS-300 Continued)

Optical Property and flexibility performances of FS-200 and FS-300

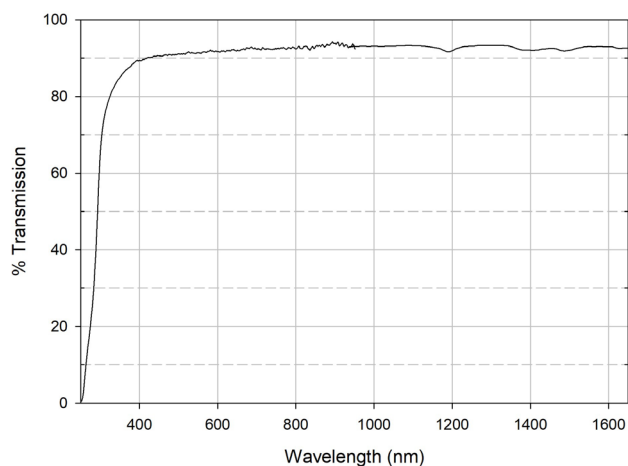
FS-200

FS-200 200 micron free-standing film
no correction for surface reflections



FS-300

FS-300 200 micron free-standing film
no correction for surface reflections



GENERAL USAGE INFORMATION:

Storage: After receipt in black syringes or amber HDPE bottles, room temperature storage (15-30°C) in the original container is required.

SAFETY AND HANDLING

The uncured adhesive can be cleaned with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), acetone, or xylene. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read Safety Data Sheet before handling.

TDS updated: V1-072022

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