



AC HI-6100

Optically Clear UV-curable High RI Hard Coat

Features

- High Tg
- Excellent re-coat ability
- Fast UV-curable
- High refractive index

Description

- UV-curable high RI hard coat

APPLICATIONS

UV-curable high refractive index hard coat for antireflection film applications.

TYPICAL PROPERTIES of NEAT RESIN

Liquid

Viscosity (cps, 25 °C)	23,000 to 28,000
Storage (°C)	20 - 25
Shelf life (15 - 25 °C)	3 months
Pot life (15 - 25 °C)	2 months

Cured film

Shrinkage (volume, %)	5
Hardness – Shore D	90
Glass transition temperature (DMA, °C)	118
Refractive index of cured film (25°C) @ 589 nm	1.561
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Tensile strength, MPa	12
Elongation (%)	10
Modulus, MPa	900

TYPICAL PROPERTIES of COATED FILM

Viscosity (cps, 25 °C in 50% solid content)	8 - 12
Suggested solvent: propylene glycol monomethyl ether (PM or PGME), Methyl Isobutyl Ketone (MIBK).	

Suggested hard coat solution for process: 40 – 50 wt. % of neat HI-6100 [Propylene glycol monomethyl ether \(PM or PGME\)](#), or Methyl Isobutyl Ketone (MIBK) or IPA.

Process

Film:	Plastic films (treated plastic film will enhance adhesion)
Coating:	Wire bar, roller coat, knife coat, dip coat or spin coat
Pre-curing:	60 – 80 °C for 1 – 2 min, IR heating is acceptable
UV-curing:	High, medium Mercury lamp or Fusion lamp or the likes
UV dose:	600 – 800 mJ/cm ²

Properties of coated film (3-5 µm)

Pencil Hardness	
TAC film	H
PET film	2H
PC substrate	2H
PMMA substrate	2H – 3H
Adhesion to film	Excellent
Re-coat	Excellent

***Minimum intensity recommended for Spot lamp system: 300 mW/cm²

***Minimum intensity recommended for Flood lamp system: 125 WPI or 49 WPCm

SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), MIBK, methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution.

Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read [Material Safety Data Sheet](#) before handling.

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