



**In Union,  
there is strength.**



## UNITHANE IC-490 NF

Revision Date: 09/23

Reviewed:09/25/2023

### RECOMMENDED FOR USE WITH:

Automotive Interiors - Non-Leather, Paint and Coating Resins, Graphic Arts, Flexible Substrates

UNITHANE IC-490 NF is an anionic NMP and APEO free dispersion of an aliphatic polyester water base polyurethane. UNITHANE IC-490 NF is designed for industrial coating applications requiring excellent gloss, abrasion resistance, dry time, release and anti-blocking properties.

### SPECIAL FEATURES

NMP-Free (NF), Low VOC (<100 g/L)

### APPLICATION TYPES

Automotive, Aircraft, Synthetic Leather, Paint, Graphic Arts, Inks, OPV, Paper, Plastics - Flexible

### TYPICAL SPECIFICATIONS

**TOTAL SOLIDS:** 34-36

**pH:** 7.3-9.0

**VISCOSITY @ 25 DEGREES C:** 20-250

**VOC (GRAMS/LITER):** 99.1-99.3

**VOC (% OF TOTAL WEIGHT):** 9.7-9.8

**SPECIFIC GRAVITY:** 1.04-1.06

**APPEARANCE:** Semi-Translucent

**GLOSS @60°:** 85-100

**FREEZE/THAW CYCLES D2243:** 0

**SHELF LIFE:** Maximum 12 months.

**HARMONIZE TARIFF NUMBER:** 3909.50.6000

### CHEMICAL RESISTANCE TESTING (D-1308)

*note: 5= no damage, films dried for 15 minutes at 80°C,  
then equalized at room temp for 7 days*

**WATER:** 5

**ACETIC ACID:** 5

**AMMONIA:** 3

**METHYL ETHYL KETONE:** 5

**2-PROPANOL:** 4

**TOLUENE:** 5

**GASOLINE:** 5

### TYPICAL FILM PROPERTIES

**FILM APPEARANCE AFTER CURING:** Clear

**TENSILE (D-882):** 5000 psi

**TENSILE AT 100% ELONGATION:** 2000 psi

**ELONGATION (D-882):** 400%

**COLD CRACK (ISO 17233):** <-30°C

**SOFTENING POINT:** 210°C

**PENCIL HARDNESS (D-3363):** 3B

**SWARD HARDNESS (D-2134):** 30

**UV RESISTANCE (D-4587):** No Damage (1000 hours at 340nm)

**IMPACT RESISTANCE (D-2794):** No Damage at 160 psi (Direct  
or Reverse)

**TABOR ABRASION (D-4060):** 11 mg loss (CS-10, 1000 cycles)

**MANDREL BEND (D522):** Pass 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 1"

**DRY TIME (D-5895):** 20 minutes

**HYDROLYSIS RESISTANCE (200 HOURS, 70°C, 95% RH):** Retained  
75% of Tensile Properties

### VARIOUS SUBSTRATE CROSS-CUT ADHESION (D-3359)

**COLD ROLL STEEL - UNPOLISHED:** 5B

**ALUMINUM - UNTREATED:** 5B

**BRASS - UNTREATED:** 5B

**ABS - UNTREATED:** 3B

**POLYCARBONATE - UNTREATED:** 5B

**NYLON - UNTREATED:** 5B

**HDPE - UNTREATED:** 0B

Certified to ISO-9001: 2015

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