



**In Union,
there is strength.**



UNITHANE IC-490 NF

Revision Date: 11/23

Reviewed: 05/29/2025

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): 98 - 100

VOC (% OF TOTAL WEIGHT): 9.8 - 9.9

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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