



**In Union,
there is strength.**



UNITHANE MP-612 NF

Revision Date: 11-21

Reviewed: 11/09/21

RECOMMENDED FOR USE WITH:

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

Unithane MP-612 NF is a NMP free, soft, inherently dull, APEO free, waterbased polyurethane dispersion with automotive grade properties. Developed for use in a formulated coatings for graphic arts, textiles, paints and selected plastics.

SPECIAL FEATURES

NMP-Free (NF), Low VOC (<50 g/L)

APPLICATION TYPES

Interior, Exterior, Automotive, Aircraft, Synthetic Leather, Paint, Graphic Arts, OPV, Paper, Textiles, Plastics - Flexible, Plastics - Rigid, Non-Woven

TYPICAL SPECIFICATIONS

TOTAL SOLIDS: 31 - 34

pH: 8.0 - 10.0

VISCOSITY @ 25 DEGREES C: 500 -1500 cps

VOC (GRAMS/LITER): 23-25

VOC (% OF TOTAL WEIGHT): 2.3-2.5

SPECIFIC GRAVITY: 1.01-1.04

APPEARANCE: Opaque

GLOSS @60°: 0-2

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: 4

AMMONIA: 4

METHYL ETHYL KETONE: 3

2-PROPANOL: 3

TOLUENE: 5

GASOLINE: 5

TYPICAL FILM PROPERTIES

FILM APPEARANCE AFTER CURING: Matte

TENSILE (D-882): 2500 psi

TENSILE AT 100% ELONGATION: 750 psi

ELONGATION (D-882): 550%

COLD CRACK (ISO 17233): below -30°C

SOFTENING POINT: 180°C

PENCIL HARDNESS (D-3363): 6B

SWARD HARDNESS (D-2134): 6

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

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

TABOR ABRASION (D-4060): 25 mg loss (CS-10, 1000g 1000 cycles)

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

DRY TIME (D-5895): 60 minutes

HYDROLYSIS RESISTANCE (200 HOURS, 70°C, 95% RH): Retained 80% of Tensile Properties

VARIOUS SUBSTRATE CROSS-CUT ADHESION (D-3359)

COLD ROLL STEEL - UNPOLISHED: 5B

ALUMINUM - UNTREATED: 5B

BRASS - UNTREATED: 5B

ABS - UNTREATED: 5B

POLYCARBONATE - UNTREATED: 5B

NYLON - UNTREATED: 4B

HDPE - UNTREATED: 0B

Certified to ISO-9001: 2015

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