

## UNITHANE IC-551 NF

Revision Date: 06/22

Reviewed:06/01/2022

**RECOMMENDED FOR USE WITH:**  
Graphic Arts, Flexible Substrates

UNITHANE IC-551 NF is an anionic NMP free and APEO free dispersion is designed for industrial coating applications requiring good gloss, flexibility and adhesion to a variety of substrates.

The performance of UNITHANE IC-551 NF can be further enhanced by blending with other Union polyurethane dispersions or by the use of external crosslinking like: polyfunctional aziridines, water dispersible isocyanates or polyfunctional carbodiimides.

### SPECIAL FEATURES

NMP-Free (NF)

### APPLICATION TYPES

Interior, Synthetic Leather, Paint, Graphic Arts, OPV, Paper, Textiles, Plastics - Flexible, Plastics - Rigid, Adhesive/Primer, Heatseal

### TYPICAL SPECIFICATIONS

**TOTAL SOLIDS:** 31 - 33

**PH:** 8.0 - 10.0

**VISCOSITY @ 25 DEGREES C:** 10 - 300 cps.

**VOC (GRAMS/LITER):** 101-102

**VOC (% OF TOTAL WEIGHT):** 9.8-10.2

**SPECIFIC GRAVITY:** 1.04-1.06

**APPEARANCE:** Semi-translucent

**GLOSS @60°:** 80 - 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:** 4

**AMMONIA:** 1

**METHYL ETHYL KETONE:** 1

**2-PROPANOL:** 1

**TOLUENE:** 3

**GASOLINE:** 5

### TYPICAL FILM PROPERTIES

**FILM APPEARANCE AFTER CURING:** Clear

**TENSILE (D-882):** 3000 psi

**TENSILE AT 100% ELONGATION:** 1030 psi

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

**COLD CRACK (ISO 17233):** below -30°C

**SOFTENING POINT:** 155°C

**PENCIL HARDNESS (D-3363):** 4B

**SWARD HARDNESS (D-2134):** 10

**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):** 15 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):** 75 minutes

**HYDROLYSIS RESISTANCE (200 HOURS, 70°C, 95% RH):** Retained &lt;50% 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:** 5B

**HDPE - UNTREATED:** 0B

**Certified to ISO-9001: 2015**

**Union Specialties, Inc.** 3 Malcolm Hoyt Drive, Newburyport, Massachusetts USA

Phone: 978-465-1717 Fax: 978-465-4194 email: union@unionspecialtiesinc.com www.UnionSpecialtiesInc.com

Copyright © 2013-2014 Union Specialties, Inc. All rights reserved, all pages.

**Disclaimer:** The information and data contained herein are believed to be correct. However, we do not warrant either expressly or by implication the accuracy thereof.