



## UR-45HV

### HIGH VISCOSITY POLYURETHANE PUTTY

Normac **UR-45HV** is a high viscosity putty, room-temperature curing 45A Polyurethane coating designed for lasting surface protection and to repair existing substrates. Designed using PTMEG Polyether with low-free technology which virtually eliminates isocyanate exposure. Excellent slump resistance up to 12mm (0.5") thickness on vertical and overhead surfaces. Packaged for easy on ratio mixing using our dual cartridge dispenser or hand mixing can kits. Used with primer, this material will adhere well to rubber, metal, polyurethane, polyurea, and concrete substrates.



#### Normac Adhesive Products Inc.

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#### APPLICATION AREAS

- Discharge and Dredge hose
- Conveyor clip joint protection
- Rubber linings/sheeting Pipes
- Expansion joints
- Conveyor belts and flights
- Marine fenders • Pulley lagging
- Fluid handling equipment
- Gasket seals

#### PROPERTIES

**Prepolymer:** PTMEG-Low Polyether

**Hardness Shore A:** 45+/-5

**Solids:** 100%

**VOC's:** Zero

**Mix ratio volume:** 2A:1B

**Mix ratio weight:** 100A:47B

**Colour:** Black, others available

**Shelf Life:** 18 months, unopened

**Storage:** 15°C-30°C (60°F-86°F) dry, away from sunlight

**Tensile strength ASTM D412:** 2.77 MPa (402 psi)

**Elongation ASTM D412:** 651%

**Tear Strength ASTM D624 Die C:** 22.07 kN/m (126lbf-in)

**Taber Abrasion 1kg, 1000cy, H18 ASTM D4060-19:** 1.5gram loss

**Dry/wet Operating Temperature:** -56°C (-70°F) to 93°C (200°F)

**Immersion operating temperature:** Max 60C (140F)

**Chemical Resistance:** usually pH 3 - 11

**Mix density:** 1.050 g/cm<sup>3</sup> (.038lb/Cl)

**Coverage:** 34sqm @ 25 micron/kg (166sqft @ .001"/lb)

**Per Unit:** 300 x 150 cartridge, 0.12sqm @ 3mm (1.3sqft @ 1/8")

600 x 300 cartridge, 0.24sqm @ 3mm (2.6sqft @ 1/8")

750g Can kit, 0.2sqm @ 3mm (2sqft @ 1/8")

#### APPLICATION DATA (23°C / 73°F)

**Precondition material:** > 20°C (68°F)

**Method:** Trowel

**Working Life:** 20 minutes

**Buff to level:** > 12 hours

**Functional Cure:** Minimum 24 hours

**Ultimate Cure:** 5 days

**Overcoat:** < 15 minutes without additional surface preparation.

Refer to "Surface Preparation" when overcoat time has expired.

#### PRIMERS : SUBSTRATE

**NP-8100 (1K) :** Mild steel, Stainless, Aluminum

**NP-8400 (1K) :** Rubber, PVC belt, Polyurethane

**NP-9500 (2K) :** Metal alloys, Multi-substrate

**NP-9600 (2K) :** Immersion service

**NP-100/200 (2K) :** Concrete

**NA-900/600RC (2K) :** Rubber, Concrete/PVC belt

#### PRODUCT CODE : KIT PACKAGE SIZE

UR4H1.....Cartridge 300 x 150ml (486g), requires manual dispenser tool

UR4H2.....Cartridge 600 x 300ml (985g), requires powered dispenser tool

UR4HQ....Quart Can Kit 750 gram A&B

UR4HG....Gallon Can Kit 3kg A&B

Cartridge includes one mixing nozzle.

#### SAFETY

FOR INDUSTRIAL USE ONLY. Review UR-45HV SDS prior to use. Strict adherence to regional health and safety regulations must be practiced. When welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

## SURFACE PREPARATION

The performance of this product will depend upon the degree of surface preparation. All substrates must be free from existing coatings, dry, clean, and structurally solid. Remove dirt and dust by sweeping or by dry compressed air. Contaminants like oil and grease can be cleaned using a lint free rag and a suitable solvent. When adequate surface preparation cannot be achieved, adhesion testing is done to confirm acceptable adhesion strength.

### METAL

Includes ferrous and nonferrous. Radius all sharp edges, grind uneven seam lines, and remove weld splatter. For maximum adhesion, grit-blast to standard SSPC-SP10 near white including a 50 micron (.002") depth profile. Other forms of cleaning and profiling are possible like slow speed grinding with aluminum oxide disks but expect lower adhesion strength. Specialty hardened metals require adhesion testing to ensure results. Cast and previously used metal should be checked for contamination and may require additional cleaning. NP-9500 primer must be used. NP-9600 wash primer can be used as a first coat for immersion service and for special alloys including aluminum and stainless.

### ELASTOMERS

Includes cured rubber, polyurethane, polyurea, and PVC belting. De-gloss using abrasive blast cleaning or power tool cleaning methods. Include a minimum depth profile of 25 micron (.001"). Buffing or sanding using slow speed rotation by wire wheel, or 36 to 50 grit aluminum oxide disks can achieve results. Avoid melting or burning the elastomer surface during preparation as this will cause adhesion failure. NP-8400 primer is used for bonding to cured rubber, polyurethane, and polyurea. NA-600RC cold bond cement is used for bonding to PVC belting.

### CONCRETE

Uneven and blow-holed surfaces should be repaired and allowed to cure. Grit-blasting or grinding to achieve a 50 micron (.002") depth profile. New concrete should be cured for a minimum of 28 days and contain less than 15% moisture. Concrete is sealed using NP-100/200 primer to prevent outgassing and to maximize adhesion. NP-100/200 primer can be mixed with sand to make a high strength repair mortar.

### OTHER

Includes carbon fiber, fiberglass, and wood. De-gloss using abrasive blast cleaning or power tool cleaning. Include a minimum depth profile of 25 micron (.001"). NP-9500 primer is used to maximize adhesion. Wood is porous and may not require primer.

## APPLICATION CONDITIONS

Ambient and surface temperatures should be similar and between 10°C to 45°C (50°F to 113°F). Ensure temperatures are 3°C (5°F) above the current dew point with relative humidity under 85%. It is possible to apply outside this temperature range but expect pot-life and cure times to vary considerably. During colder temperatures Pt A (resin) may become solid or present a waxy appearance. Before mixing, slowly warm Pt A (resin) back to a clear liquid above 20°C (68°F). Always protect the surface from contaminants and direct sunlight.

## APPLICATION INSTRUCTIONS

1. Prime substrate. See primer TDS for application instructions
2. Build to desired thickness after the primer is touch dry
3. Additional layers can be applied within the overcoat window
4. Clean up immediately using a suitable solvent
5. Repairs can be done after lightly abrading and cleaning the area
6. Buffing to level the surface can be accomplished using a slow speed sander

## CAN KIT MIXING

1. One 750g kit includes one (1) can 510g part A, and one (1) pouch 240g part B.
2. One 3kg kit includes one (1) can 2.04kg part A, and four (4) pouches 240g part B.
3. Material preconditioned temperature is >20°C (68°F).
4. Empty contents of part B (curative) into part A (resin).
5. For large kit sizes, power mix using propeller type jiffy mixer and power drill.
6. Mix thoroughly until a uniform streak free consistency has been achieved.
7. Avoid introducing air into the mixture.
8. Ensure mixing away from sides and bottom is done adequately.

## DUAL CARTRIDGE MIXING

1. Material preconditioned temperature is >20°C (68°F)
2. Remove nut and cap seal. Install mixing nozzle using nut. Cut tip for desired material flow
3. Install dual cartridge into dispensing gun. Dispose initial material (6") to ensure proper mixing
4. Cartridges that are not fully depleted can be re-sealed and used again with a new mixing nozzle



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*The directions for the use of our products are based upon tests believed to be reliable but no warranty is given. Since conditions for the use of this product are beyond the seller's control, all risks are assumed by the user. Please contact your local agent or call Normac Adhesive Products Inc. for further assistance.*