

# R-27704

## *Fast-Setting Neoprene Contact Adhesive*

A fast-drying, high-tack polychloroprene contact adhesive formulated for rapid bonding of elastomeric and porous materials in general industrial applications. R-27704's accelerated solvent evaporation and shortened open time make it well suited to production work, smaller bond areas, and installations where quick grab and early handling strength are required.

## PRODUCT DESCRIPTION

R-27704 is a solvent-based, fast-flashing contact adhesive based on a neoprene (polychloroprene) elastomer system. Its hexane-forward solvent blend delivers accelerated open-time development relative to slower-flashing contact cements, enabling shorter mating cycles and faster handling strength. R-27704 bonds a wide range of natural and synthetic rubbers, closed-cell foams, leather, fabrics, and most rigid substrates including metal, wood, plastic laminates, and cured concrete.

## TYPICAL APPLICATIONS

General rubber bonding

Gasket and seal installation

Closed-cell foam lamination

Leather and fabric bonding

Production assembly work

Metal and laminate bonding

## TYPICAL PHYSICAL PROPERTIES

<b>Appearance</b>	Yellow liquid	<b>Application Method</b>	Brush, roller, or spray
<b>Base Polymer</b>	Polychloroprene (neoprene)	<b>Coverage (typical)</b>	200–275 ft <sup>2</sup> /gal, two-surface
<b>Odor</b>	Solvent odor	<b>Evaporation Rate</b>	Faster than n-butyl acetate
<b>Weight per Gallon</b>	6.70 lb/gal	<b>Service Temperature</b>	–20 °F to +200 °F
<b>Non-volatile Content</b>	21.44% by weight	<b>Storage Temperature</b>	40–90 °F, avoid freezing
<b>VOC Content (as packaged)</b>	367 g/L	<b>Shelf Life</b>	12 months from date of manufacture, unopened
<b>Flash Point</b>	–20.0 °F (–28.9 °C) closed cup	<b>Packaging</b>	Quart, gallon, and 5-gallon containers

## APPLICATION PROCEDURE

### SURFACE PREPARATION

All surfaces must be clean, dry, and free of dust, oil, grease, release agents, frost, and standing moisture. Rubber substrates should be wiped with a compatible solvent such as MEK or acetone immediately prior to adhesive application. Smooth non-porous substrates benefit from light abrasion or scuffing to improve mechanical keying. Freshly skived rubber surfaces should be bonded within a short window to avoid surface contamination.

### STANDARD APPLICATION — OPTIMUM CONDITIONS

For best results, condition adhesive and substrates to 65–85 °F (18–29 °C) prior to application. Stir adhesive thoroughly before use. Apply a thin, even coat to *both* mating surfaces using a brush, short-nap roller, or suitable spray equipment. Allow to flash-off until aggressively tacky but no longer wet to the touch (typically 5–12 minutes at 70 °F, 50% RH — note that R-27704 flashes faster than heavy-duty contact cements and has a correspondingly shorter open window). Mate surfaces with firm, uniform pressure across the full bond area. Bond strength develops rapidly; full cure in 24 hours.

### COLD-WEATHER APPLICATION

R-27704 is suitable for application at substrate and ambient temperatures *below 65 °F* when the procedure below is followed.

#### APPLICATION BELOW 65 °F

The neoprene/solvent system in R-27704 remains fully functional at reduced application temperatures. At temperatures below 65 °F, solvent evaporation and tack development slow in proportion to temperature; open time extends and an extended flash-off period is required before mating surfaces. R-27704's faster-flashing solvent blend produces shorter flash-off times than heavier-bodied contact cements across the full temperature range. When the procedure below is followed, final bond strength is not reduced relative to application at optimum temperature.

SUBSTRATE / AMBIENT TEMPERATURE	MINIMUM FLASH-OFF TIME	TIME TO HANDLING STRENGTH	TIME TO FULL CURE
65–85 °F (optimum)	5–12 min	30–45 min	24 hours
55–65 °F	12–22 min	1–2 hours	36 hours
45–55 °F	22–40 min	3–5 hours	48 hours
40–45 °F (minimum)	40–60 min	6–10 hours	72 hours

Values are typical and assume still-air conditions at 50% RH. R-27704's fast solvent flash requires close monitoring at optimum temperatures — verify aggressive tack by light finger contact before mating; the adhesive should feel tacky but leave no transfer to the finger. Over-extended flash-off can result in reduced tack and weaker initial bond.

#### COLD-WEATHER PROCEDURE

**01 Condition the adhesive.** Store R-27704 at 65–80 °F for a minimum of 24 hours prior to use. Do not apply cold adhesive to cold substrates; cold adhesive is more viscous and will produce a heavier

film than intended.

- 02 Verify substrate condition.** Substrates must be dry and free of frost, condensation, and surface moisture. A wipe with a clean dry cloth should leave no visible dampness.
- 03 Apply a thin, even coat to both surfaces.** Do not apply a heavy coat to compensate for cold temperatures; this extends flash-off time further and can trap solvent at the bond line.
- 04 Monitor flash-off closely.** Verify aggressive tack by light finger contact before mating. If finger transfer occurs, allow additional flash-off; if the film appears dry with no tack, the open window has closed and the surface should be re-coated.
- 05 Mate surfaces with firm, uniform pressure.** A hand roller or equivalent pressure applicator should be used across the full bond area. Initial contact strength is reduced at lower temperatures; maintain mechanical support or restraint until handling strength is reached.
- 06 Protect the bond during cure.** Do not subject the bond to shear, peel, or service loads until the time to full cure shown above has elapsed. Protect from rain, frost, and contaminants throughout the cure period.

## I 3M COMPARABLE REFERENCE

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The following 3M product has a comparable chemistry, application method, and performance envelope to R-27704. This reference is provided to assist specifying engineers and purchasing personnel in identifying a functionally similar product within the 3M catalog.

### HANNA / RUBATEX

#### R-27704

Fast-setting brushable neoprene contact adhesive for general industrial bonding with accelerated open-time development.

### 3M COMPARABLE

#### 3M 1300L

Scotch-Weld 1300L; low-viscosity variant of the 1300 family with faster solvent flash-off, suited to production bonding and smaller work.

*Disclaimer: 3M and Scotch-Weld are trademarks of 3M Company. This cross-reference indicates comparable chemistry and general performance envelope; it does not represent a certification of drop-in equivalence. Users switching between manufacturers should conduct independent adhesion and performance testing on representative substrates before committing to production use. Hanna Rubber Company is not affiliated with or endorsed by 3M Company.*

## I LIMITATIONS

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- Do not apply below 40 °F or above 100 °F substrate temperature.
- Do not apply to wet, frozen, or contaminated surfaces.
- Not recommended for use on EPDM, silicone rubber, or plasticized vinyl without adhesion testing.
- Not recommended for continuous immersion service or for bonds subject to sustained peel loading.
- Product is flammable. See Safety Data Sheet (SDS) prior to use for handling, storage, and PPE requirements.

## **| STORAGE & SHELF LIFE**

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Store in original unopened containers at 40–90 °F, away from heat, sparks, and direct sunlight. Do not allow product to freeze. Rotate stock on a first-in, first-out basis. Shelf life is 12 months from the date of manufacture in an unopened, sealed container. Date of manufacture is stamped on each container.

## **| HEALTH & SAFETY**

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R-27704 is a Class 3 flammable liquid (UN 1133, PG II). Flash point –20.0 °F closed cup. Contains hexane, acetone, and toluene. The wider flammable vapor range (1.77–9.65%) and lower flash point relative to standard contact cements require heightened attention to ventilation and ignition-source control. Use only in well-ventilated areas with appropriate respiratory, skin, and eye protection. Keep away from heat, sparks, open flames, and hot surfaces — no smoking. Refer to the current R-27704 Safety Data Sheet for complete hazard information, exposure limits, first-aid measures, and regulatory data prior to use.

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*The data presented in this document represents typical values based on material of standard quality produced under standard conditions. It is offered in good faith as information only and not as a product specification. No warranty, express or implied, is made. Each user is responsible for determining suitability for the intended end use. Users should conduct their own adhesion testing for critical applications and should verify that the product, as supplied, meets the requirements of the specifying authority.*

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