

POLYSET® COMMERCIAL ROOFING ADHESIVE (CR-20)

DESCRIPTION:

POLYSET® Commercial Roofing Adhesive ("CRA") (CR-20) is a low-pressure, two-component spray polyurethane foam adhesive used to adhere insulations, coverboards, and fleece membranes, including all Duro-Last® PVC Fleece and Duro-TECH™ TPO Fleece to acceptable substrates.

CRA is applied in continuous beads for board attachment (can be multi-layer) or applied in a spatter pattern for fleece membrane attachment.

CRA is compatible with the following properly prepared roof substrates. Refer to the [Adhered Roofing System specification](#) for additional application guidelines:

- Cementitious wood fiber (Tectum™) decks
- Steel decks (metal roofing not allowed)
- Gypsum decks
- Wood decks
- Structural concrete decks (minimum 2,500 psi (17.2 MPa))
- Lightweight insulating concrete (minimum 160 psi (1.1 MPa))
- Polyisocyanurate (ISO, flat and tapered)
- Expanded polystyrene (EPS, flat and tapered)
- Extruded polystyrene (XPS, flat and tapered)
- Gypsum- or cement-based barrier/cover boards
- Duro-Last Vapor Barrier/Torch-Down Vapor Barriers
- Sprayed polyurethane roofing (any existing coating must be removed by scarfing or shaving)
- Aged asphaltic roofing (smooth and granulated)
- Base sheets

Contact Engineering Services for approved base sheets

ORDERING:

Refer to the CRA coverage rates table for approximate coverage rates. Refer to the [Adhered Roofing System specification](#) for additional application guidelines.

- The following items are available when ordering:
 - CRA A/B Canister Kit (Item #11055)
 - CRA 17G Refillable Canister (Item #11057) **"A" & "B" canister only**
 - CRA 17G Refillable Canister Kit (Item #11058)
 - CRA A/B Mini Canister Kit (Item #4109-001)
- Each kit includes:
 - A" & "B" Canister
 - Hose/Gun Kit
 - 8 – 10 Nozzles (ColorWise®) (depending on kit)
 - wrench



A/B Canister Kit, Hose/Gun Kit, Wrench, and Nozzles



A/B Mini Canister Kit, Hose/Gun Kit, Wrench, and Nozzles

POLYSET CRA (CR-20) APPROX. COVERAGE RATES AND WEIGHTS				
Canister	Spatter Pattern	Bead Pattern 2 1/2 In. (64 mm) Beads		Net Weight
		6 In. (152.4 mm) O.C.	12 In. (305 mm) O.C.	
CRA A/B	3,000 ft ² (278.7 m ²)	1,750 ft ² (162.6 m ²)	3,500 ft ² (325.2 m ²)	44.5 lb (20.18 kg) A component 44.1 lb (20 kg) B component
CRA 17G Refillable	11,100 ft ² (1,031.2 m ²)	6,500 ft ² (603.9 m ²)	13,000 ft ² (1,207.8 m ²)	150 lb (68.04 kg) A component 148 lb (67.13 kg) B component
CRA A/B Mini	900 ft ² (83.6 m ²)	550 ft ² (51.1 m ²)	1,100 ft ² (102.2 m ²)	27.7 lb (12.56 kg)

STORAGE AND HANDLING:

- **WARNING: EXTREMELY FLAMMABLE.**
Keep away from heat / sparks / open flames / hot surfaces. **Do not apply while smoking.**
- Store product out of direct sunlight, tightly closed in a dry, cool, and well-ventilated place. Protect from freezing temperatures.
- Keep containers closed tightly during transport and storage.
- Canisters "A" and "B" should be stored between 45 –90° F (15 – 32° C).

SHELF LIFE:

- Shelf life of 18 months from date of manufacture while stored in a dry area.
- Do **not** allow material to freeze.
- Shelf life will be shortened if exposed to elevated heat temperatures.
- Follow instructions on the boxes for overnight and long-term storage.

PRECAUTIONS:

- **WARNING: EXTREMELY FLAMMABLE.**
Keep away from heat / sparks / open flames / hot surfaces. **Do not apply while smoking.**
- **KEEP AWAY FROM CHILDREN.**
- Do **not** smoke, eat, or drink while actively using this product.
- Use only in a well-ventilated area.
- Keep away from potable water storage systems.
- Read Safety Data Sheets ("SDS") prior to using. SDS can be found at: <https://www.duro-last.com/>.
- Wear proper personal protective equipment, such as gloves and eye protection, per the SDS.
- Avoid contact with skin.
- Avoid breathing vapors.
- Protect containers from freezing. Do not leave exposed to direct sunlight for prolonged periods of time.

INSTALLATION TEMPERATURES:

- Canister temperature must be 70° – 85° F (21° – 29° C) during application. Failure to maintain proper temperature will result in off-ratio foam mixture.
- Use canister heaters in cold conditions or use heat blankets and shade the canisters from sunlight.
- Avoid storing canisters overnight on rooftop/jobsite when ambient temperatures are excessively hot or cold, or use heat blankets.
- Substrate temperature must be 40° F (4° C) and rising during application.

POLYSET CRA (CR-20) APPLICATION TIMES	
Properties	Mixed Components
Open Time	1 – 10 minutes
Work Life in Mixing Nozzle	30 seconds
Time to Tack Free	5 – 12 minutes
Time to Handling Strength	4 – 8 minutes after bonding
Time to Full Cure	24 hours

NOTE: Times may be affected by temperature and weather conditions.

SUBSTRATE PREPARATION:

- Adhesion tests are required on all substrates. Refer to the [Adhered Roofing System specification](#) for additional application guidelines.
- Apply to surfaces which are clean, smooth, dry and free of oil and grease.
- Protect surfaces not to be foamed.
- On full tear-offs, existing decks having residual asphalt must be cleaned and scraped smooth as best as possible.
- Do **not** use during inclement weather.
- Do **not** use on wet surfaces.
- Insulations must **not** exceed 4 x 4 ft (1.2 x 1.2 m).
- Roof boards (barrier or cover) must **not** exceed 4 x 8 ft (1.2 x 2.4 m).

RISE AND WORKING TIMES

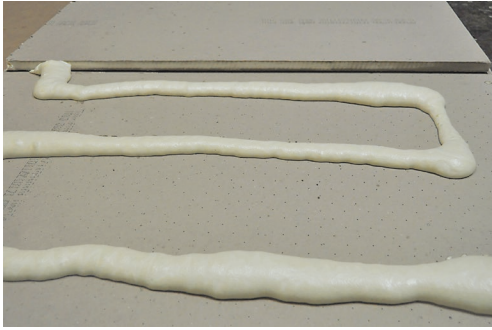
Rise time may vary:

- 10 – 15 seconds on 100° F (37.8° C) substrates
- 5 minutes on 40° F (4° C) substrates

Working time may vary:

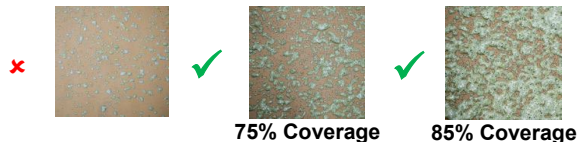
- 1 minute on 100° F (37.8° C) substrates
- 10 minutes on 40° F (4° C) substrates

POLYSET CRA (CR-20) PROPERTIES		
Product	A – Component	B – Component
Base	Polymeric Isocyanurate	Polyol Amines
Blowing Agent	134a	134a
Physical Form	Liquid	Liquid
Specific Gravity 77° F (25° C)	1.23	1.1
Color	Light Brown	Amber to Brown
Volatile Organic Compounds (VOC)	0 lb/gal (0 g/L)	0.89 lb/gal (107 g/L)
VOC when used as intended with both parts	0.45 lb/gal (53.5 g/L)	
Flash Point (TCC)	>200° F (>93° C)	>200° F (>93° C)
Auto Ignition Temperature	>600° F (>316° C)	Not Determined
Viscosity 77° F (25° C)	130 cps	150 cps
Mix Ratio	1.14	1

BOARD INSTALLATION**(Bead pattern)**

CR-20 is applied to substrate in 2 1/2-inch (64-mm) beads

- Apply adhesive in 2 1/2-inch (64-mm) width beads out of the hose gun and ColorWise nozzle. If ColorWise nozzle turns blue, stop immediately and warm the product up to installation temperatures as listed on page 2.
- Space beads 12 inches (305 mm) or 6 inches (152 mm) apart according to the [Adhered Roofing Systems specification](#).
- Adhesive will then expand several inches in width and rise. Once adhesive has risen and foamed up, boards may be placed onto adhesive.
- Do **not** apply boards prior to adhesive rising.
- Do **not** exceed working time.

FLEECE MEMBRANE INSTALLATION**(Spatter pattern)**

- Using the hose gun and ColorWise nozzle, sweep side to side to spatter the substrate with droplets covering approximately 75% – 85% of the surface area. Refer to the **CRA COVERAGE RATES** table.
- Once the adhesive has risen and foamed up, the membrane may be placed onto the adhesive.
- Immediately brush the membrane surface with a broom to push out entrapped air and ensure good contact with the adhesive.
- If the membrane curls, weigh it down for 10 – 15 minutes, ensuring that the corners and edges are weighed down properly.

CLEANUP/CANISTER DISPOSAL:

- Uncured adhesive can be cleaned with solvents such as mineral spirits, xylene, etc. Cured adhesive can be scraped from surfaces with a rigid scraper.
- Individual A and B adhesive components in their liquid state should be treated as hazardous waste and disposed of in a licensed facility according to federal, state, and local regulations.
- Empty cartridges, 15-gallon (56.8-L), and 50-gallon (189.3-L) drums can be disposed of in most landfills as non-hazardous waste. However, be sure to consult federal, state, and local regulations for your specific area with regards to the treatment of hazardous and nonhazardous wastes.
- Discharge canisters with included hose gun and ColorWise nozzle completely into a waste container until one canister is empty of material.
- Remove hose gun and ColorWise nozzle manifold and discharge residual chemical into a sealed waste container (i.e., plastic bucket) until residual chemicals and gases are evacuated and both canisters are depressurized.
- Empty canisters, hose gun and ColorWise nozzle can be disposed of in most landfills as non-hazardous waste. However, be sure to consult federal, state, and local regulations for your specific area with regards to the treatment of hazardous and nonhazardous wastes.
- Dispose of captured residual chemical in a licensed facility according to applicable federal, state, and local regulations. Do **not** discharge chemicals into the sewer system or allow them to contaminate soil.

The information given on this PDS is subject to change without notice. Always check the Duro-Last website at www.duro-last.com for the latest information, changes, and updates, or contact Duro-Last at 800-248-0280.

The performance specifications published in this document are based off of information provided by ICP Products (the supplier) and are not guaranteed in any way by Duro-Last, particularly since building design, engineering, and construction, including workmanship and materials, are beyond Duro-Last's control.