Sikadur® Combiflex®
Unique ‘strip and seal’ system to seal and waterproof the unusual joint

Description
Versatile sealing system for irregular and difficult joints and cracks. Withstands extreme movements and chemical exposures while maintaining a watertight seal. The system consists of Sikadur 31, Hi-Mod Gel, epoxy adhesive, and Combiflex perforated Hypalon® sealing strip.

Where to Use
- Types of Joints: construction, expansion, cracks, connecting
- Types of Substrates: concrete, mortar, steel, iron, aluminum, brick, wood, and other building materials
- Types of Structures: tunnels, pipes, storage tanks, swimming pools, parking garages, sewage treatment tanks, roofs

Advantages
- Exceptional adhesion on all common building materials.
- Easy application.
- Easy repair.
- Economical solution.
- Applicable even on damp surfaces... Sikadur 31, Hi-Mod Gel, is moisture-tolerant.
- Fast-setting Sikadur 31, Hi-Mod Gel, ensures early joint use.
- Permanently elastic, even at low temperatures.
- Seals large and small irregular joints, even with high movement.
- Weather-resistant.
- Resists many chemicals.
- Withstands UV light and is ozone resistant.
- Approved for contact with potable water.
- Perforations along edges of Combiflex sheeting provide “rivet effect” and add mechanical bond to augment chemical bond.
- Contractor has advantage of always working on surface of substrate; no need to remove existing failed joint sealant.
- No priming; no routing; no need to clean old joints.

Coverage

Packaging
- Kits: Pre-measured kits containing 4 in. wide by 20 ft. long Hypalon sheeting, 60 oz. of Sikadur 31, Hi-Mod Gel and 1 pint of Combiflex Activator.
- The components may be also be purchased separately:
  - Hypalon sheeting - 4, 8 and 12 in. wide by 20 ft. long and 82 ft. long.
  - Sikadur 31, Hi-Mod Gel -3 gal. units, and 12 oz. units, 12/case.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)
RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Shelf life</td>
<td>Combiflex Kit - 2 years in original, unopened containers.</td>
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<tr>
<td>Storage Conditions</td>
<td>Hypalon sheeting - concrete gray.</td>
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<tr>
<td>Color</td>
<td>Sikadur 31, Hi-Mod Gel, adhesive - concrete gray.</td>
</tr>
</tbody>
</table>

Typical Technical Data for Sikadur 31, Hi-Mod Gel, Adhesive:
- Pot Life: Approximately 30 minutes.
- Tack Free Time: 2-3 hours

Typical Technical Data for Hypalon Sheet:
- Tensile Properties (ASTM D-412)
  - Tensile Strength: 1,000 psi (6.8 MPa)
  - Elongation at Break: 800%
  - Tensile Set After Break: 400%
- Tear Resistance (ASTM D-624) Die C
  - Resistance to Tear: 250 lb./in.
- Low Temperature of Performance: Maintained to -40°F

Typical Technical Data for Sikadur Combiflex System:
- Peel Strength (ASTM D-903)
  - 7 days Substrate, Concrete: No loss of adhesion between the Hypalon and the Sikadur 31, Hi-Mod Gel, or the Sikadur 31, Hi-Mod Gel and the concrete.
- 12 Month Chemical Exposure
- Ozone Resistance
  - 3 month Exposure: Water/Ozone (3 ppm) - No Effect; Air/Ozone (2-300 ppm) - No Effect

For additional information on Sikadur 31, Hi-Mod Gel, consult Technical Data Sheet or call Technical Service.
**How to Use**

### Surface Preparation
Surface must be clean and sound. It may be dry or damp but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, and any other contaminants.

**Preparation Work: Concrete** - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blastcleaning or equivalent mechanical means.

**Steel** - Should be cleaned and prepared thoroughly by blastcleaning.

### Mixing
Pre-mix each component of Sikadur 31, Hi-Mod Gel. Proportion 1 part Component 'B' to 2 parts Component 'A' by volume into a clean pail. Mix thoroughly for 3 minutes using a Sika paddle on a low-speed drill (400-600 rpm) until uniform in color.

### Application
Wipe Hypalon sheeting with Activator a minimum of 1 hr., and a maximum of 8 hrs., before installation. Apply the mixed Sikadur 31, Hi-Mod Gel, 1-1/2 in. on each side of the joint to a thickness of approximately 1/32 in. Work into the substrate for positive adhesion. Set the sheeting into the epoxy. Using a hard roller, force the sheeting down into the epoxy. Apply an additional 1/32 in. layer of epoxy as a top coat to the Hypalon sheeting. Sikadur 31, Hi-Mod Gel should not be applied in greater than a 1/8-in. thickness. Sheetling may be bonded together thermally with a hand-welding tool (i.e., Leister heat-welder or similar equipment available at waterproofing supply outlets) or by Activator. Experience demonstrates that heat welding is a quicker method if bonding two strips.

### Caution
**Component 'A'** - Irritant; Sensitizer - Contains epoxy resin and crystalline silica (sand). Can cause skin sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. If sanded, crystalline silica dust may be generated and may cause lung injury (silicosis) and is listed as a suspect carcinogen by NTP and IARC (2A). Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

**Component 'B'** - Corrosive; Sensitizer - Contains amines and crystalline silica (sand). Contact with eyes or skin may cause severe burns. Can cause skin and/or respiratory sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Overexposure may cause liver, kidney, and/or central nervous system effects. If sanded, crystalline silica dust may be generated and may cause delayed lung injury (silicosis) and is listed as a suspect carcinogen by NTP and IARC (2A). Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

### First Aid
In case of skin contact, wash immediately and thoroughly with soap and water. If symptoms persist, consult a physician. For respiratory problems, remove person to fresh air; if symptoms persist, contact a physician. Remove contaminated clothing.

### Clean Up
In case of spills or leaks, wear suitable protective equipment, contain spill, collect with absorbent material, and transfer to suitable container. Ventilate area. Avoid contact. Dispose of in accordance with current, applicable local, state, and federal regulations.