



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 need to rebuild/repreg joint nosings.
- ▲ No priming; no routing; no need to clean old joints.

COVERAGE

Hypalon Sheeting - 20 lineal ft./roll
Sikadur 31, Hi-Mod Gel - 40 lineal ft./gal.
Combiflex Activator - 20 lineal ft./pt.

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.

TYPICAL DATA FOR SIKADUR COMBIFLEX (Material and curing conditions 73F (23C) and 50% R.H.)	
SHELF LIFE	Combiflex Kit - 2 years in original, unopened containers.
STORAGE CONDITIONS	Store dry at 40-95F (4-35C.) Condition material to 65-85F before using.
COLOR	Sikadur 31, Hi-Mod Gel, adhesive - concrete gray. Hypalon sheeting - concrete gray.
TYPICAL TECHNICAL DATA FOR SIKADUR 31, HI-MOD GEL, ADHESIVE:	
MIXING RATIO	Component 'A': Component 'B' = 2:1 by volume.
POT LIFE	Approximately 30 minutes.
TACK FREE TIME	2-3 hours
TYPICAL TECHNICAL DATA FOR HYPALON SHEETING:	
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 -40F
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	
Water Treatment Process: Immersion in potable water, aerobic, and anaerobic treatment tanks.	No change in performance . Combiflex unaffected.
OZONE RESISTANCE	
3 month exposure	water/ozone (3ppm) - 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.

LIMITATIONS

- ▲ Minimum surface temperature 40F.
- ▲ Do not thin Sikadur 31, Hi-Mod Gel. Solvents will prevent proper cure.
- ▲ Maximum application thickness of epoxy is 1/8 in.
- ▲ Epoxy is a vapor barrier after cure.
- ▲ Cover plates over joint are required when using Combiflex in traffic areas.
- ▲ For applications in face or back-pressure joints, consult Technical Service for joint design suggestions.
- ▲ Maximum performance of the Sikadur

Combiflex System is achieved only when neither the epoxy adhesive nor the Hypalon sheeting has stress applied in service. 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.

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 sheet. Sikadur 31, Hi-Mod Gel should not be applied in greater than a 1/8-in. thickness. Sheeting 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.

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/MSHA 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/MSHA 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.

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**KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION**

**KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY**

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants its products to be free from manufacturing defects and to meet Sika's current published properties when applied in accordance with Sika directions and tested in accordance with ASTM and Sika Standards. User determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product and excludes labor or the cost of labor. Any claim for breach of this warranty must be brought within one year of the date of purchase.

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1-800-933-SIKA NATIONWIDE

Regional Information and Sales Centers

For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation

201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.

601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.

Carretera Libre Celaya Km. 8.5
Corregidora, Queretaro
C.P. 76920 A.P. 136
Phone: 52 42 25 0122
Fax: 52 42 25 0537