TBP Converting, Inc.
SikaFlex 552 Structural Adhesive

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Sikaflex®-552

High-Strength Structural Assembly Adhesive

Industry

Technical Product Data (typical values) *Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

Chemical base		One-part Silane Terminated Polymer
Color		White, Black
Cure mechanism		Moisture-curing
Density (uncured)		12.1 lb/gal
VOC (EPA method 24)		0.16 lb/gal (19.5 g/l)
Non-sag properties		Good
Application temperature		41–95°F (5-35°C)
Tack free time[1]		40 min.
Curing speed		(see diagram 1)
Shrinkage		<2%
Shore A-hardness (ASTM D 2240)		50
Tensile strength (ASTM D 412)		435 psi
Tensile lap-shear strength (ASTM D 1002)		300 psi
Elongation at break (ASTM D 412)		300 %
Tear propagation resistance (ASTM D 624)		85 pli
Glass transition temperature		-76°F (-60°C)
Service temperature	Permanent 4 hours 1 hour	-40°F to +194°F(-40°C to +90°C) 284°F(140°C) 302°F(150°C)
Shelf life (storage below 77°F (25°C)	Cartridge & Unipac Drum & Hobbock	12 months 9 months

[1] 73°F (23°C) / 50% r.h.

Description

Sikaflex®-552 is a low VOC, high performance, elastic, gap-filling, one-part, silane-terminated polymer structural adhesive that cures on exposure to atmospheric moisture to form a durable elastomer. Sikaflex®-552 contains no isocyanate or solvent. Sikaflex®-552 is manufactured in accordance with the ISO 9001/ISO 14001 quality assurance system and the Responsible Care Program.

Product Benefits

- AAMA 805.2-94 certified
- Bonds well to a wide variety of substrates without the need for special pre-treatment
- Resistant to UV radiation
- Resistant to aging and weathering
- Capable of withstanding high dynamic stresses
- Very low VOC content
- Silicone and PVC-free
- Isocyanate-free
- High recovery
- Elastic
- Low odor

Areas of Application

Sikaflex®-552 is suitable for structural joints that will be subjected to dynamic stresses. Sikaflex®-552 bonds well to a wide variety of substrates and is suitable for making permanent high strength elastic adhesive seals. Suitable substrate materials include wood, metals, metal primers and paint coatings (two-part systems), ceramic materials, plastics and glass. Seek manufacturer's advice before using on transparent materials that are prone to stress cracking.

This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Sikaflex®-552 cures by reaction with atmospheric moisture. At low temperatures the water content of the air is lower and the curing reaction proceeds a little more slowly. If Sikaflex®-552 is used in combination with a PUR adhesive, the polyurethane adhesive must be fully cured before seam sealing with Sikaflex®-552.

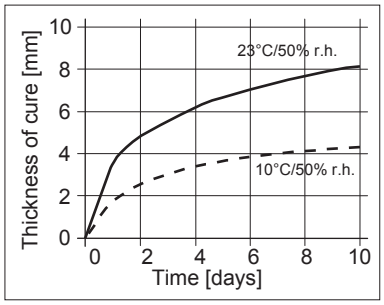

Diagram 1: Curing speed Sikaflex®-552

Chemical Resistance

Sikaflex®-552 is resistant to UV radiation, fresh water, seawater and proprietary aqueous cleaning agents; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, concentrated mineral acids, caustic solutions or solvents. The above information is offered for general guidance only. Advice on specific applications will be given on request. Contact the Technical Service Department of Sika Industry at tsmh@us.sika.com.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from all traces of grease, oil, wax and dust. The adhesion of Sikaflex®-552 can be improved by wiping the joint with Sika® Aktivator 205 (a cleaning and activating agent). Advice on specific applications is available from the Technical Service Department of Sika Industry at tsmh@us.sika.com. Substrate must have appropriate corrosion protection prior to application of sealant.

Application

To ensure satisfactory conditions for curing, do not apply at temperatures below 41°F (5°C) or above 95°F (35°C). The optimum temperature for substrate and sealant is between 59°F (15°C) and 75°F (25°C). For advice on selecting and setting up a suitable pump system please contact the System Engineering Department of Sika Industry at tsmh@us.sika.com.

Tooling and finishing

To facilitate tooling, wet pointing tool with soapy water. Do not use alcohol or alcohol-containing agents.

Removal

Uncured Sikaflex®-552 may be removed from tools and equipment with suitable solvent. Follow solvent manufacturer's instructions for use and warnings. Once cured, the material can only be removed mechanically. Wash hands thoroughly with soap and water after handling. Do not use solvents on skin!

Overpainting

Sikaflex®-552 can be overpainted before becoming tack-free. The paint, and paint process must be tested for compatibility by carrying out preliminary trails. The hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the paint film over time.

Limitations

Avoid application below 41°F (5°C) and above 95°F (35°C) as improper surface properties could result. Since the material is moisture cured, provide sufficient exposure to air. Do not apply over cured silicones or in the presence of curing silicones or urethanes. Avoid contact with excessive amounts of alcohols or alcohol-containing mixtures, as some temporary initial surface tackiness may result. Not designed for direct glazing applications.

CAUTION: IRRITANT. - Contains Silane-Terminated Prepolymer (CAS: Mixture). May cause eye/ skin/ respiratory irritation.

HMIS

Health	2
Flammability	1
Reactivity	0
Personal Protection	C

FIRST AID

Eyes - Hold eyelids apart and flush thoroughly with tepid water for 15 minutes. **Skin -** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and tepid water. **Inhalation -** Remove to fresh air. **Ingestion -** Do not induce vomiting. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

Further Information

Copies of the following publications are available on request at www.sikausa.com:
- Material Safety Data Sheets
- Product Data Sheets

In case of emergency call:
Chemtrec: 800-424-9300
International: 703-527-3887

KEEP OUT OF REACH OF CHILDREN
NOT FOR INTERNAL CONSUMPTION
FOR INDUSTRIAL USE ONLY
KEEP CONTAINER TIGHTLY CLOSED

Packaging Information

Cartridge	300 ml
Unipac	600 ml
Hobbock	6 gallon
Drum	51.5 gallon

Value Basis

All technical data stated on this Product Data Sheet are based on

the results of laboratory tests only. Actual measured data in the field may vary due to site specific conditions which are not known to Sika and beyond our control.

Handling and Storage

Store product in closed container in a cool dry place between 40°F and 77°F when not in use. Protect from frost and humidity. Avoid direct contact. Wear personal protective equipment (chemical resistant gloves/goggles/ clothing) to prevent contact with skin and eyes. Use with adequate general and local exhaust. Use properly fitted NIOSH respirator if ventilation is poor. Remove contaminated clothing and launder before reuse.

Clean Up

Avoid contact. In case of spill, wear personal protective equipment (chemical resistant goggles/clothing/ gloves). Ventilate area and collect spill. If ventilation is poor use properly fitted NIOSH respirator. Contain spill and collect with absorbent material. Dispose of in accordance with applicable local, state and federal regulations.

Limited Material Warranty

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES IMPLIED OR EXPRESS SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available at www.sikausa.com. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.