

TECHNICAL DATASHEET

# STALOC HP-960 STRUCTURAL ADHESIVE

*adflex-technology*

## PRODUCT DESCRIPTION

STALOC HP-960 structural adhesive is a high-performance structural adhesive for bonded joints requiring high-strength, elasticity, impact resistance as well as resistance against tensile loads and vibrations.

Its formulation enables STALOC HP-960 to withstand powder coating processes. The product is therefore perfectly suited for applications in automotive engineering, structural engineering, facility engineering, naval architecture, wind and solar power stations as well as storefront construction.

The high elongation as well as the excellent resistance against UV radiation ensures a safe use of STALOC HP-960 structural adhesive.

**STALOC's *Adflex-Technology* provides for an ideal combination between elasticity and bonding strength.**

## PRODUCT CHARACTERISTICS

- *adflex-technology* for extreme loads
- suitable for powder-coating processes
- excellent UV- and ageing-resistance
- fire and smoke: M1/F1 accreditation (according to standards NF F 16-101 / STM-S 001)
- excellent resistance against water, saltwater, desalinated water, light acids and bases, various oils, etc.
- permanently elastic in a range from -40°C to +150°C (+200°C for approx. 20 min.)
- solvent-free

## AREAS OF APPLICATION



- Flexible / sealing bonds for the construction of busses, caravans, rail and truck applications
- Bonding of composite materials
- Bonding of solar systems, sunroofs and terrace products
- Component bonding of boats, yachts and vessels
- Bonding of polyester parts onto metal structures
- Bonding of window profiles

## TECHNICAL PROPERTIES

ATTRIBUTE	UNIT	SPECIFICATION
basis		Modified methacrylate adhesive <i>with adflex-technology</i>
colour		black
pot life	min	5 to 7 min.
finger-tight (depending on temperature)	min	approx. 12 min
final cure time	h	24 h
Mixing ratio		10:1
Shore hardness (ASTM D 2240)		70 to 80
Contains solvents		No
temperature resistance	°C	-40°C to +150°C (short term up to 200°C for approx. 20 min.)
working temperature	°C	+10°C to +35°C
maximum elongation	%	60 %
shear strength (DIN 53283)	N/mm <sup>2</sup>	non-alloy steel: 16 N/mm <sup>2</sup> stainless steel 16.5 N/mm <sup>2</sup> Alu 6060: 17 N/mm <sup>2</sup> Alu 6061: 16 N/mm <sup>2</sup> Alu 1050A: 16 N/mm <sup>2</sup> ABS/ABS: substrate failure FRP/FRP: ~16 N/mm <sup>2</sup> PMMA: substrate failure
Impact strength (ISO 113-43)	N/mm	20 N/mm on galvanized steel
Recommended gap	mm	250 µm to 1 cm
Shelf life at max. +20°C		approx. 6 months

## CHEMICAL RESISTANCE

A = excellent resistance, B = minor effect, C = destructive effect

Substance	
Water	A
Saltwater	A
oil and grease	A
gasoline and diesel	A
water @ 90°C	B
Glycol / water-mixture (anti-freeze)	B
Acetic acid 10%	B
Xylene	B
Highly-concentrated acids	C

## APPLICATION INFORMATION

Recommended application – further information can be found in the material safety data sheet

The parts to be bonded must be clean and free of oil and grease. Use STALOC assembly cleaner for surface preparation. Roughening the surfaces increases the strength of the bond, but is not imperative. Mount the mixer and squeeze out the adhesive; the mixing ratio is controlled automatically. Mix the material until an even colour is achieved. Distribute the adhesive on the bonding surface using a spatula or similar if necessary. The fixture time is 12 minutes at room temperature. Lower temperatures increase the necessary fixture time. Final cure takes 24 hours. Seal the cartridge again after use, with the stopper (in the plunger). Do not use if ambient temperatures and substrate temperatures are below 10°C.



## SUBSTRATE

The product can be used for the following substrates or bonding partners:

### metallic materials:

- Aluminium (anodized, ground, blank)
- Carbon steel and tin plate steel
- Stainless steel
- Steel cast parts (galvanized, chrome plated, blasted, etc.)
- Non-ferrous metals (copper, brass, etc.)
- Painted metal surfaces

### plastics:

- ABS
- PA
- PC and PMMA
- Polyester
- PUR
- PVC
- TPO

### composite and other materials

- GFK / CFK
- EPDM / PP-EPDM
- glass
- wood

## SAFETY INFORMATION

Please send your request for the latest version of the material safety data sheet (MSDS).

## PACKAGING / VOLUME

50ml cartridge – 12 pcs. per box (use original STALOC guns for application)

490ml cartridge – 6 pcs. per box

20 l and. 200 l drums optional

The information and data in this document are for information purposes only. STALOC cannot take responsibility for the results obtained by a third party, whose methods are not under STALOC control. The determination of the suitability for the user's purpose of any STALOC product is the responsibility of the client. Consequently, STALOC recommends testing of the products before using it for a series application. Moreover, it is the responsibility of the customer to ensure a safe environment for the user. STALOC therefore disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of STALOC products. STALOC cannot be held liable for any consequential or incidental damage resulting from the use of a STALOC product, including lost profits or damages of any other kind. Products or processes mentioned herein might be subject to released or pending patents or licences.

Issued: 24.01.2013



Call STALOC



[www.staloc.com](http://www.staloc.com)



[WWW.STALOC.COM](http://WWW.STALOC.COM)