



ISR 70-03 sskf Dual SMP®

The Simson Industrial Special Range is a range of high tech quality products especially developed for industrial applications.

Product

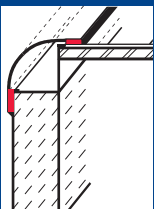
Simson ISR 70-03 sskf Dual SMP® used with the Dual SMP® technology guarantees an increased and controlled cure speed and reliability in the production process and extends the application possibilities. ISR 70-03 sskf Dual SMP® (version of ISR 70-03 Dual SMP® with a longer open time) is a good compromise between an adhesive and a sealant. ISR 70-03 sskf is suitable for making elastic constructive joints, which also require a high strength and is based on Silyl Modified Polymer (SMP).

Applications

- Elastic bonding of large overlaps in general industrial applications.
- Industrial bonding processes that require quick strength build up.
- Bonding at low relative humidity circumstances.
- Elastic bondings and sealings in e.g. bus-, caravan-, train- and truck construction.
- Bonding and sealing of sunroof systems.
- Bonding of corner profiles of aluminium or polyester on trailers.
- Bonding of polyester parts on metal frames.
- Bonding of floor systems.
- Sealing welded seams.

Features

- Controlled curing (independent of relative humidity).
- Quick strength build up.
- Solvent-, isocyanate- and PVC free.
- Very good UV-resistance and ageing properties.
- In general good adhesion on several substrates without the use of a primer.
- Permanent elastic within temperatures from -40°C till +120°C.
- Neutral, odourless and fast curing.
- Paint compatible with most industrial paint- or lacquer systems, both alkyd resin and dispersion based (due to the large scale of different types of industrial paints a paint compatibility test is recommended).
- Paintable after skin forming (wet on wet); this will not influence the curing speed.





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Adhesion

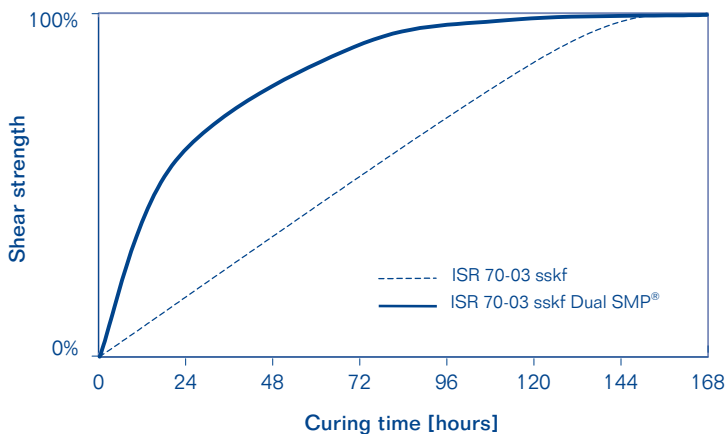
In general ISR 70-03 sskf Dual SMP® sskf adheres well without primer on clean, dry, dust- and grease free substrates of aluminium, stainless steel, galvanised steel, zinc, copper, brass, powder coated metal, most lacquered metal surfaces, glass, PVC, polyester (GRP), painted and lacquered wood, etc. No adhesion on untreated polyethylene, polypropylene and teflon. In those cases where, due to great thermal or physical loads and especially under wet conditions, high adhesion demands are needed, the use of Simson Prep M is recommended. Prep M degreases and prepares the surface of the substrate in one step. On plain, untreated wooden surfaces and other porous substrates Simson Prep P is recommended. For more details concerning Prep M and Prep P consult the specific Technical Data Sheets. For not mentioned substrates and additional information consult Bostik.

Method of use

Simson ISR 70-03 sskf Dual SMP® can easily be extruded with a Dual SMP® 400P air pressure gun or pump system at temperatures between +5°C and +35°C.

A small amount of the Simson B-component SMP® (1 part B-component on 40 parts of SMP) significantly speeds up the curing time and the strength build up of SMP based products from Bostik.

The strength buildup in time is given in the figure below.



Specimen curing conditions 23°C/50%RH. Strength determined with single lap shear specimens, overlap of 25x25 mm, 2 mm bondline thickness, test speed 50 mm/min.

The B-component allows for large overlaps and seams, which will not cure with a 1-component product because moisture is not able to diffuse into the larger overlaps. Together with the standard SMP product the B-component is extruded with a dedicated applicator, the Simson Dual SMP 400P. Alternatively, for large projects a 2-component SMP machine, equipped with a device for the B-component in 600 ml sausage packaging, can be used. The two components are mixed together by means of a static mixer shortly before extrusion.

In sealing applications ISR 70-03 sskf Dual SMP® should be tooled or smoothed within 15 minutes (at 20°C/50% R.H.) with a spatula or putty knife, occasionally moistened with a soap solution. Avoid soap solution penetrating between joint sides and sealant, because this will create loss of adhesion. In bonding applications the substrates have to be assembled within 35 minutes (at 20°C/50% R.H.) after applying ISR 70-03 sskf Dual SMP®. In general an adhesive thickness of 2 mm is recommended. At a temperature of +20°C and a relative humidity of 50% ISR 70-03 sskf Dual SMP® can be painted with the most industrial paints already 10 minutes after application. Best adhesion of paint coats is generally obtained if painted within 4 hours after applying ISR 70-03 sskf Dual SMP®. Cleaning tools or removing uncured residue of ISR 70-03 sskf Dual SMP® can be done with a clean colourless cloth, wetted with Simson Liquid 1. It is recommended to make a trial first to check possible attack of the substrate by Liquid 1.



ISR 70-03 sskf Dual SMP®

Technical data

ISR 70-03 sskf

Basic material	Silyl Modified Polymer (SMP)
Specific gravity	ca. 1.4 g/ml
Colours (standard)	grey
Packaging	400 ml sausage or 20 l drum

B-component SMP®

Basic material	Dispersion based paste with special fillers and additives
Specific gravity	ca. 1.4 g/ml
Dry contents	74%
Colour	off white
Packaging	10 ml tube or 600 ml sausage

ISR 70-03 sskf Dual SMP®

Skin forming time	ca. 15 min.	(20°C/50% R.H.)
Open time	< 35 min.	(20°C/50% R.H.)
Shore A hardness	ca. 55	(DIN 53505)
Volume change	< 3%	(DIN 52451)
Green strength	ca. 300 Pa	(Physica Rheometer MC100) (max. load which can be applied per m ² uncured adhesive without sagging)
Tensile stress (100%)	ca. 1.7 MPa	(DIN 53504/ISO 37)
Tensile stress at break	ca. 2.6 MPa	(DIN 53504/ISO 37)
Elongation at break	ca. 250%	(DIN 53504/ISO 37)
Shear stress	ca. 2.5 MPa	(DIN 53283/ASTM D1002) (Alu-Alu; adh. thickness 2 mm, test speed 50 mm/min.)
Tear propagation	ca. 16 N/mm	(DIN 53515/ISO 34) (Type C, test speed 500 mm/min.)
E-Modulus(10%)	ca. 3.3 MPa	(DIN 53504/ISO 37)
Solvent percentage	0%	
Isocyanate percentage	0%	
Temperature resistance	-40°C till +120°C	
Temperature resistance	+180°C	(max. 30 min.)
Application temperature	+5°C till +35°C	
UV- and weather resistance	excellent	

Storage stability

ISR 70-03 sskf Dual SMP® can be stored for 12 months in an original, unopened container in a dry place at temperatures between +5°C and +30°C.

Further information

The following publication is available on request:

- Material Safety Data Sheets (MSDS)

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Bostik
The Adhesive Company

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