

Application

Hercules Galvanized or Stainless Steel Grease Slipjoints (HGSJ) or (HSSJ) is the cheaper alternative to Herculeslip Composite Slipjoints (HSC). It is easily applied slip joint material, used on load bearing brickwork and under concrete slabs (see Fig 1-6).

Unlike HSC, HGSJ and HSSJ are not designed to accommodate sliding face rotation of supported structures or to evenly distribute their weight. Most commonly Grease Slipjoints are used under cast in-situ concrete slabs and less critical structural components.

Grease Slipjoints is a temporary solution compare to the design life and reliability of Composite Slipjoints. HSSJs would last longer due to the better corrosion resistance of Stainless Steel material compare to HGSJs. Both types eventually will seize up as the Molybdenum Grease dries up. That will depend from the working environment and it is unavoidable. However we are using the best available Molybdenum Grease to extend the design life of Slipjoints.

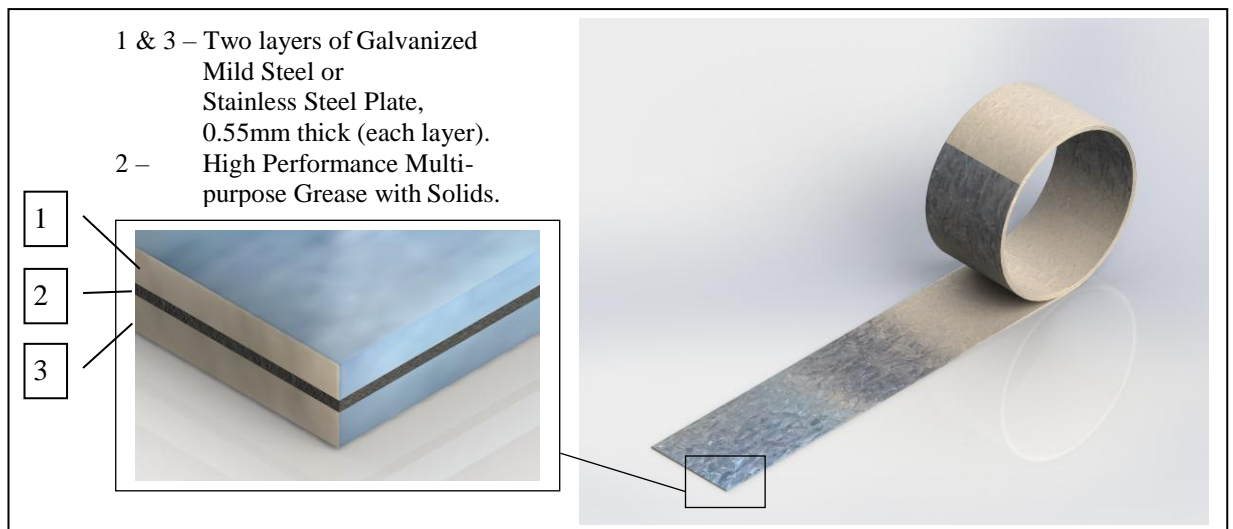


Fig 1-5 Grease Slipjoint

Materials

Grease Slipjoints consist of two layers of Galvanized Steel or Stainless Steel with Molybdenum Grease in-between for sliding and protection of sliding surfaces. Each Slipjoint is held together by tape. Grade 304 Stainless Steel is used for the regular slipjoints. Grade 316 SS is used in modified types for applications near the water or for the use in corrosive environments.

Types

Nine most commonly used types of HGSJ and HSSJ are represented in Table 1-7. Widths are reflected in the Part Number Types. Other widths are available upon request.

Table 1-7 Types of Hercules Grease Slipjoints

PART NUMBER	TYPE	HGSJ, kg/m ($\pm 100g$)	HSSJ, kg/m ($\pm 100g$)
HGSJ or HSSJ/90	FLAT	0.78	0.8
HGSJ or HSSJ /110	FLAT	0.95	0.97
HGSJ or HSSJ /150	FLAT	1.3	1.32
HGSJ or HSSJ /200	FLAT	1.73	1.76
HGSJ or HSSJ /230	FLAT	1.99	2.03
HGSJ or HSSJ/230(CB)	CAVITY BRIDGE	2.6	2.65
HGSJ or HSSJ /250	FLAT	2.16	2.2
HGSJ or HSSJ/250(CB)	CAVITY BRIDGE	2.77	2.83
HGSJ or HSSJ /270	FLAT	2.34	2.38
HGSJ or HSSJ/270(CB)	CAVITY BRIDGE	2.95	3
HGSJ or HSSJ /300	FLAT	2.6	2.64

Design

The following design limitations are recommended:

- | | |
|--------------------------------|---------------------------------------|
| • Coefficient of friction* | 0.04 (Zinc-Zinc) - 0.16 (Steel-Steel) |
| • Expansion capacity | ±2 to ±5mm |
| • Recommended contact stress** | 100 – 150MPa |
| • Operating Temperature Range | -25°C to +120°C (peak +130°C) |
| • Dropping Point for Grease | +175°C |

* Coefficient of friction has been obtained by comparison of several independent sources and it is an approximate value for greased surfaces of specified materials. A problem occurs with the value concerning the type of grease used. Considerations should be made in using this value until further notice.

** The recommended contact stress is a practical value range for common application scenarios. The ultimate load would be significantly higher in a range between 150-200MPa and it is limited by the Grease lubricating capacity and steel properties.

Installation

The HGSJ and HSSJ should be installed as shown on Fig 1-6 A&B and in accordance with the following instructions:

1. Prepare the brick or block work seating with a 10-12mm thick wood float mortar finish so that it is reasonably level over the complete length of the strip. A meter straight edge should not show more than 3mm variation in level along its length.
2. Hold the HGSJ or HSSJ in position with *Hercules Adhesive Type HBA* (a small amount at either end is sufficient), and mask the butt joints with adhesive tape.

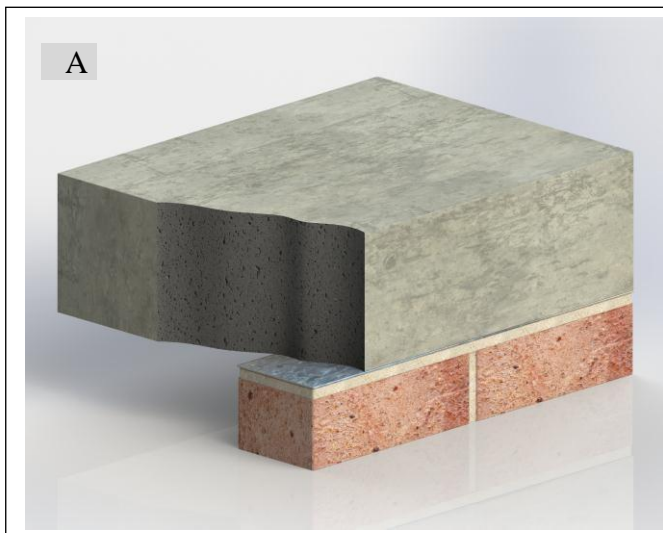
**NOTE**

Hercules Adhesive is available in 300 gram cartridges. Each cartridge will provide enough adhesive to cover 25 metres of strip.

3. Pour concrete directly onto the top surface of the Grease Slipjoints.

Fig 1-6 Grease Slipjoints (A-Flat) (B-Cavity Bridge)

A-F lat



B

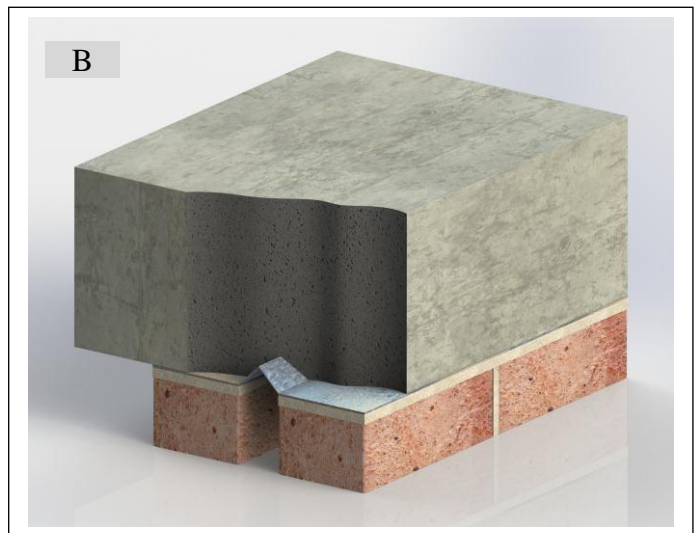


Fig 1-6 Grease Slipjoints (A-Flat) (B-Cavity Bridge)

Ordering

- Nine most commonly used types of HGSJ and HSSJ are represented in Table 1-7. Widths are reflected in the Part Number types.
- Small quantities (1-5 lengths) of HGSJ and HSSJ are supplied in rolls (approximately 300-500mm in diameter) on a small skid, except for the Cavity Bridge Types, they are always supplied flat.
- Medium and large quantities are supplied flat on a pallet in 3000 and 2400mm lengths accordingly.

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