

TECHNICAL BULLETIN

Hylomar Hyloseal and Hyloloc

HYLOMAR HYLOSEAL/HYLOLOC PRODUCT RANGE



Hylomar Hyloseal and Hyloloc products are an exciting addition to the range of Hylomar high performance adhesives and sealants.

The products are pre-applied sealants and thread lockers, most commonly used to lock and/or seal threaded components. In the case of Hylomar Hyloseal 204 the product also has excellent torque control properties.

The full Hylomar Hyloseal/Hyloloc product range includes:

Hylomar Hyloseal 204

This is a water-based product, used to seal threaded components against leakage of fuel, lubricants, coolants and gases. It has excellent torque control properties, which allow assembly torque to be precisely achieved.

The product should not be shaken or vigorously stirred for at least 24 hours before applying – this will prevent voids/pitting in the dried surface of the coating. Fasteners should be pre-heated to 40°C and dried at 60°C.

The product is applied to a fastener in a band, or patch, the length/height of which should be 1-1.5 times the diameter of the fastener and the threads should be filled to between 65 and 70% of their capacity. On smaller fasteners, this can be achieved by diluting the product (with water) to allow it to flow into the thread.

Hylomar Hyloseal 204 has already gained several automotive specifications including Ford, Perkins, Rover and Jaguar.



Hylomar Hyloseal 205

This is a high viscosity version of 204 for applications where the sealant is applied as a bead rather than a band or patch.

Both Hylomar Hyloseal 204 & 205 have a wide operating temperature range -50 to 180°C (-58 to 350°F) and can be pressurised immediately after assembly.

Hylomar Hyloseal 600, 610 & 620

The Hylomar Hyloseal 600 series of products are Epoxy / Polyurethane based, flexible sealants for sealing the under-head surfaces of fasteners and plugs, to prevent leakage of fuel, lubricant, coolant and gases. If the products are applied under the correct conditions they can be re-used up to twelve times.

Hyloseal 600 & 610 consist of two components that must be thoroughly mixed before use. Both products have a mixed pot life of a few hours.

Hyloseal 620 is a single component that requires a heat cure of 30 minutes at 160°C. Refer to the individual Technical Data Sheets for further information.

Hylomar Hyloseal 600, 610 & 620 should ideally be applied to specially designed fasteners and/or plugs. The slight redesign of the head of the fastener or plug allows a bead of sealant to be applied on the underside of the head, the bead is then compressed on assembly. The hole into which the fastener or plug fits also requires some design modification.

Hyloseal 600 series products can be used to replace 'O' rings and washers. The products can lead to reduced assembly times, reduced stock, improved quality control and finished product consistency. The products have a wide operating temperature range - 40 to 150°C (- 40 to 300°F).*
*See individual data sheets for further information.



The surface finish of the mating surfaces should ideally be Ra3.2 and there should be no sharp edges on either surface as this could adversely affect the sealing capability of the Hyloseal. When a suitable lubricant is added as a final finish, the products can be re-used up to 12 times.

Hylomar Hyloseal 600 products have been written into specifications by Ford, General Motors, Perkins and Rover.

Hylomar Hyloloc 400 series

Hylomar Hyloloc 400 series products are water-based thread locking and sealing products. The length of the thread coating should again be 1 to 1.5 times the thread diameter as a standard for coating with the first few threads on the fastener free of any product. There should also be a thread fill of 60-70%.

The guide to typical coating weights, when using Hylomar Hyloloc 406 is:

| Bolt size | M8 | M10 | M12 |
|------------------|-----------------|-----------------|-----------------|
| Wet weight (gm) | 0.0500 – 0.0750 | 0.1136 – 0.1704 | 0.1840 – 0.2760 |
| Dry weight (gm) | 0.0220 – 0.0330 | 0.0500 – 0.0750 | 0.0810 – 0.1215 |

NB: These weights were determined using a coating length of 1 x diameter of each size of fastener.

Hylomar Hyloloc 406 is supplied in two parts and must be mixed prior to application to the threaded components. Once mixed the product has a shelf life of 24 hours.

Hylomar Hyloloc 406 eliminates the need for applying anaerobic thread-locking compounds at the point of assembly, giving higher production rates and eliminating operator inconsistencies. The product can also inhibit corrosion of mating components due to its sealing action. The product has an operating temperature range of – 50 to 150°C (-58 to 300°F).

Hylomar Hyloloc 406 has been written into specifications by Ford