SPECIFICATION

The DFT Design Manual for Roads and Bridges Part HA 104/09 defines the materials which will provide the best possible performance for access chambers and gully grating installations. Section HD27/04 provides guidance for rapid concrete construction.

HA104/09 - Bedding materials should be non-shrink, should have a minimum workable life of 15 minutes, have a compressive strength that exceeds $30N/mm^2$ in 3 hours and have a tensile strength that exceeds $5N/mm^2$ in 3 hours.

HD27/04 - Mortars for bedding ironwork such as manhole cover frames during repairs may be trafficked when the strength is expected to be $20 N/mm^2$.
For rapid construction, this strength should be achieved within 2 hours.

INSTALLATION IN DETAIL

A MIX MATERIAL

Materials are pre-blended in controlled quantities. Pour the liquid polyester resin into a suitable container followed by the powder hardener component. Using a mechanical mixer ensure that the materials are thoroughly mixed (wetted).

B BEDDING LAYER

Place layer of bedding mortar on brickwork approximately 25mm to 40mm in depth. Ensure that enough coverage is available to make contact with the entire flange of the casting.

C SEAT CASTING

Position casting frame over the manhole chamber and tamp down to ensure that the mortar keys into the casting.

D LEVEL CASTING

Ensure that the casting is level with the road surface by placing a straight edge across the corners of the casting onto the road. Frame can be made level by tamping the frame into the bedding material.

E CHECK GAPS UNDER FLANGE

Ensure that there are no visible gaps under the flange and smooth bedding material with trowel both inside and outside of chamber.

F ENVELOPE FLANGE

Use the remaining mortar to envelope the flange paying particular attention to the corner areas. Smooth out the mortar with a trowel to ensure good bonding with the casting and to avoid any initial cracks in the bedding material.

G BACKFILL

Check that the bedding material has hardened and backfill with asphalt. Ensure that the asphalt is properly compacted.