

APPLICATION INSTRUCTIONS

3M 290 application

Adhesive

Generally termed “hot melt” type, as it requires heating in order to liquefy for application. Supplied in blocks, it has an indefinite storage life in cool conditions.

READ, HEALTH AND SAFETY NOTES CAREFULLY BEFORE HEATING COMMENCES.

Heating

It is advisable to break the adhesive block into smaller pieces for more efficient heating. Using suitable application equipment capable of maintaining initial adhesive temperature, the adhesive is heated to 160-180° C. This is the optimum temperature for both adhesion and application properties. Lower temperatures will reduce adhesion and make it more difficult to handle. Higher temperatures maintained for longer periods may damage properties and could lead to combustion.

Surface Preparation

Ensure the road surface is dry, free of dust and loose material. It may be necessary to “tamp” the surface in order to flatten any prominent crowns etc. for application onto surface dressing. Oil, grease or salt deposits should be removed either mechanically or chemically. Studs should not be laid over loose detritus, mud or similar extraneous matter or over old flaking marking of paint or thermoplastic material. If the road surface is at a temperature of less than 5° C, or if it is wet, it should be warmed carefully by a road heater so that, when the material is laid, the surface temperature is above 5° C and the surface is dry.

Application

After surface preparation, the adhesive should be dispensed from the heating unit directly onto the road surface in order to maintain correct contact temperatures. Oil jacketing or other heating at the dispensing head is recommended in order to achieve this. Sufficient adhesive should be applied onto the surface to cover an area slightly larger than the stud base. The stud should immediately be placed on to the adhesive, ensuring an edge seal around the entire stud. It is better to apply too much adhesive than not enough. Studs not bedded on the entire base surface area will be subject to non-uniform loading which may lead to failure. Applications to surface dressed, or other surfaces of macro - texture may require two applications of adhesive in order to fill the interstices. The stud should float on a layer of adhesive, not rest on the road surface or crown of any prominent chipping.

Subject to ambient temperature, the studs should be allowed to set for 30-120 seconds before exposure to traffic. Complete resistance to rotational movement of the stud by hand indicates it is ready to be trafficked.

APPLICATION INSTRUCTIONS

Safemark Temporary Surface mounted Hot Melt Studs

Notes

1. In view of the temperature involved when handling the hotmelt adhesive, normal protection measures should be taken during heating and application i.e. suitable gloves, clothing, goggles etc. If splashed with hot adhesive, it should be treated instantly with cold water. Preferably immersed.
2. Care should be taken to avoid any contact between the hot adhesive, and water.
3. **UNDER NO CIRCUMSTANCES SHOULD THE ADHESIVE EXCEED 195°C.** Heating above the recommended 160-180°C for prolonged periods may affect its properties and heating above 195°C may lead to combustion.
4. Technical assistance is available for demonstration of the application technique if required.
5. **IF STUDS ARE INSTALLED IN UNFAVOURABLE CONDITIONS OPTIMUM PERFORMANCE CANNOT BE EXPECTED,** ensure that application instructions are adhered to for best results, and use only our supplied components.

The approved Hotmelt road stud system meets the requirements of BSEN 1463 and have been accepted by the Department of Transport, the Scottish Development Department, the Welsh Office and D.O.E. Northern Ireland, for use on all types of roads Referenced TSRGD (2002). This approval is a legal requirement and substitution of any of the system components is not only illegal, but will breach any contractual arrangements with the specifiers.

As at April 1994 surface mounted studs type Safemark.