

Glass micro beads application instructions

• Overview:

Reflective glass micro beads form an integral element of all modern road marking application techniques and define a marking's properties. Reflective micro beads compose themselves into a dried up road marking surface, and as such work like miniature lenses collecting the light of approaching vehicles and reflect it back to the car. Using glass micro beads significantly improves road safety during the night.

• Range of application:

Micro beads are applied directly onto freshly applied road markings to ensure they are visible at night. Micro beads can be used both in thin-coat markings applied using paints and in thick-coat markings made of thermoplastic materials or two-pack chemically-cured materials. When selecting the right granulation of micro beads for various types of paint, thermoplastic and chemically cured material, follow the recommendations of companies supplying these products which are provided in the technical specifications.

• Application conditions and methods:

Micro beads are to be applied under pressure onto horizontal road markings within 1-3 seconds after marking application which ensures that they are better immersed in the material. The pressure of the spray has to be determined individually per application machine and marking material. It should provide optimal submersion of the beads ensuring correct reflectivity during the entire service life of the marking. Granulation and the amount of micro beads used should also be selected depending on the type of material and the thickness of coating applied according to guidelines provided by the producer of the material. Generally 200-300g of micro beads are applied per square meter. Micro beads have to be used exclusively with horizontal road marking materials adapted for reflective marking application. Wet and lumped micro beads should not be used.

• Marking reflectivity testing:

Marking reflectivity testing should be performed using a reflectometer for measuring the reflectivity index for horizontal road marking materials (thin- and thick-coat). The reflectivity index during the service life of the marking should come to $\geq 100 \text{ mcd m}^{-2} \text{ lx}^{-1}$. An evaluation of the distribution and submersion of the micro beads using a magnifying glass is also desirable. The beads should be spread uniformly over the marking. Our many years of experience suggest that a submersion of micro beads at a level of 55 – 65% of their height ensures optimal reflectivity of the marking during its service life.

• Storage and transport:

Glass micro beads should be stored in their original packagings in closed rooms protected from water and humidity. Packagings containing micro beads should be transported under enclosure protecting them against wetting and mechanical damage. During the application of micro beads on the road, the packagings need to be secured in a way which prevents the beads from spilling. An excessive amount of free lying beads creates a traffic hazard. PPG Polifarb Cieszyn S.A. offers glass micro beads from Interminglass in the following product range:

- Glass micro beads 100-600 H
- Glass micro beads 100-600 H/TEF – new!
- Glass micro beads 125-630 MB9B2T
- Glass micro beads 125-630 MB9B2H
- Glass micro beads 125-850 TEF
- Glass micro beads 400-840

* H means that the beads have undergone silicone processing preventing granulation which is of neutral effect to the paint.

*T means that the beads have undergone silicane processing which improves their adhesion to the paint.

* the remaining symbols are the production codes of the producer.