

Visibility and safety

A new type of road marking

Road user safety and mobility are actuality themes. With vertical signalisation - road signs, safety barriers ... - road marking is one of the means utilised to guide users in total safety on our roads.

During rain at night or in dark weather, the visibility of traditional road marking diminishes strongly. During high water showers, the lines can even become practically invisible when a water film covers them totally. That is the reason for certain manufacturers of road marking products are for the moment developing solutions in order to avoid this inconvenience. They are called wet night visibility markings for use during rain (RR) or just during wetness (RW) when it is only humid.

Drops

A Danish manufacturer LKF has developed a new type of 'structured' road marking. Structured road marking is a road marking that is not applied in a continuous method but which has thickness variations in its lengths or its width contrary to the 'flat' usual road markings. In this case, the road marking - manufactured from thermoplastic Alkyd resins - is applied with a machine specifically adapted for this product in the form of drops of a constant geometry in a thickness of about 4.5 mm. Thereafter, it is covered with drop-on glass beads *l*.

Thanks to the goodwill of Mr Daniel Hayen, from the Road Directory of Liège (Belgium) and Mr Housseine Kadioglu, from The Regional District of Awans (Belgium), a certain length of this type of road marking has just been applied, as discontinued centre lines and edge lines on the motorway E25 (Liège-Bastogne) between Beaufays and Tilff (precisely between KP 9 and KP 5 - in the direction of Liège). In the Flemish region, other motorway jobs have also been carried out.

The result of a measuring campaign of the luminescent properties and the retro-reflexion done on the Tilff job site mid-September 2006 - 10 weeks after application - are excellent. Luminescence is a measure that indicates the day visibility of road marking. Retro-reflexion gives the night visibility by indication of the quantity of light issued from a car head lights reflected back to the eyes of the driver. This has been measured in dry and humid conditions.

Wizz!

Another characteristic of this type of product is the emission of a whistling sound when the tires of a vehicle drive over it. In addition to its visibility property, this marking has a sound signature which warns the driver during overtaking when he drives on the road marking but also when the car tires get in to contact the edge lines markings.

This reinforces the safety of the driver who once warned, can deviate from his path in case of dozing off.

Obtaining the master key

The manufacturer has furthermore introduced a technical certification request for ATG for this product, in accordance with the certification guide UBAtc G0024 relating to hot applied product. The manufacturer should receive in the near future the official certification number which can then be used without further "in advance testing requirements" for the road marking works in Belgium 2. LKF already has already two ATG technical certifications for others thermoplastic road marking products, one of which is for preformed thermoplastic product.

Road marking materials, controlled product!

The authorities' official specifications RW99 specify that road paints and hot applied road marking 3 must be manufactured respectively in accordance with certification guides G0023 and G0024 edited by the Belgian Union for technical certification in the construction industry.(UBAtc)

The ATG logo applied on a product indicates that the concerned product has satisfied all the laboratory tests in accordance with the corresponding certification guide requirements, but also that regular visit are carried out by an independent inspection body within the manufacturing plant of the producer and that samples of the product are taken for testing in an external laboratory. This certification procedure is managed within the Direction of Technical Specifications for Normalisation based in Liege (Belgium).

Signed Ir **Gauthier Michaux**

- 1. The CE marking on drop on aggregates is compulsory since 1st May 2005. The RW99 requires further conformity to PTV882 for the glass beads used on the RGG job sites.*
- 2. The list of all the validated ATG road marking products (paints and thermoplastics) is available on the internet site "Quality and Construction" (<http://qc.met.wallonie.be>) - Folder "Spécifications techniques - ATG UBAtc Génie Civil"*
- 3. The certification guide G0028 on "cold applied materials for road marking" is under preparation. The certification of this type of product will soon be able to start. The conformity to the cold applied products in accordance with specification guide will be required in the CCT RW99.*