

Subject: Puncture sealants – tyres in normal highway use

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There are many different sealants on the market and their diversity is such that the BTMA can only offer general guidance.

The relevant British Standard, BS AU 159, covering repairs to tyres for motor vehicles used on the public highway, specifies permanent, vulcanised repairs. Furthermore, that the tyre must be removed from the rim and thoroughly examined for secondary damage not visible from an external inspection. The use of puncture sealants does not meet these requirements and consequently the industry does not regard them as a permanent repair.

The BTMA is concerned that drivers will be unaware of, or ignore, the fact that sealants are a temporary repair and hence drivers do not have the damaged tyre professionally examined within a timely period to assess its suitability for a permanent repair. In these circumstances safety may be compromised.

Broadly speaking there are three categories:

“Manufacturer-applied pre-puncture” sealants

“After market pre-puncture” sealants

“Post-puncture” sealants

“Manufacturer-applied pre-puncture” sealants are extremely viscous products applied by the manufacturer into the tyre during or immediately after the manufacturing process. These materials have been validated and applied by the tyre manufacturer. In most cases they provide a near instantaneous seal following a penetration.

The consumer should follow all the instructions given by the tyre manufacturer for these special service products. It is advised to inspect tyres on a regular basis and certainly before any long journey, as due to the product's efficiency in sealing small penetration holes, drivers may be unaware that damage has occurred.

If a puncturing object is found it should be carefully removed and even if no air loss occurs the tyre must be taken to a tyre dealer for internal inspection and, where applicable, repair.

“After market ‘Pre-puncture’ sealants are most commonly liquids applied to the tyre, through the valve, at the time of fitting. Since these products are not approved by tyre manufacturers, the compatibility of the material with the tyre cannot be guaranteed. If the consumer chooses to use such sealants all of the instructions given by the manufacturer of the sealant should be strictly followed.

“Post-puncture” sealants are regarded purely as a ‘get you home’ measure and are applied through the valve following a puncture. In almost all cases a punctured tyre will have been run in an under-inflated or deflated condition and, therefore, there is some risk in continuing to use a tyre that may have sustained secondary damage. Furthermore, the risk may be compounded if the method used by the particular brand of sealant to re-inflate the tyre does not have the capacity to restore an adequate operating pressure. It is recognised that there are circumstances when post-puncture sealants will be of value – for instance to a lone driver physically unable to change a wheel. Nevertheless, the industry is concerned that drivers may disregard the sealant manufacturer's instructions or falsely believe that a permanent repair has been effected.

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