

TIRE SEALANT CONTAINER

TECHNICAL FIELD OF THE UTILITY MODEL:

This utility model relates in general to a container and more particularly to a tire sealant container which can be connected to a tire valve for injecting the sealant into the
5 tire.

BACKGROUND OF THE UTILITY MODEL:

Modern pneumatic tires are designed for extended use on vehicles such as automobiles and trucks over long distances. Regardless of how well these tires are constructed, they remain susceptible to puncture by sharp objects inadvertently left on
10 roadways, resulting in a sudden loss of air pressure or complete deflation. When a tire is punctured, the motorist is typically required to replace the tire with a spare or seek external assistance. In many situations, however, changing a tire is difficult or dangerous, such as when the puncture occurs on an uneven roadway where the vehicle cannot be safely lifted using a jack, or when the puncture occurs on a heavily traveled road where
15 there is insufficient space to safely perform the replacement.

In response to these problems, various solutions have been proposed, including the development of pneumatic tire sealants intended to temporarily repair punctures and restore tire pressure. One known example is disclosed in **EP0167934A2**, which describes a tire sealant and inflator composition comprising a resin, a latex sealant, alkylene glycol,
20 fibers, an alkanolamine, a foaming agent, and water. This composition is packaged in an aerosol container using a chlorofluorocarbon propellant and is introduced into the tire

through the valve stem. Upon application, the composition acts to seal the puncture and simultaneously inflate the tire to a pressure sufficient to support the weight of the vehicle.

While such prior art solutions have demonstrated effectiveness in temporarily sealing punctured tires and allowing limited continued operation, the method of injecting the sealant through the valve stem presents several disadvantages. These include incomplete distribution of the sealant within the tire, clogging of the valve mechanism, limited sealing reliability for larger or irregular punctures, and insufficient long-term performance. Moreover, many existing systems do not provide precise control over the treatment process and may result in uneven coating or imbalance of the tire during subsequent use.

SUMMARY OF THE UTILITY MODEL:

It is therefore the object of this utility model to provide a tire sealant container adapted to be connected to a tire valve (with the valve core) for injecting a sealant into a tire without the use of a compressor or any other similar apparatus.

Another object of this utility model is to provide a tire sealant container which provides a dip tube within the container body adapted to be fitted to the tire valve stem (without the valve core) for injecting the sealant into the tire by pressing the plastic container body to create pressure therein pumping the sealant from the container into the tire.

A further object of this utility model is to provide a tire sealant container which is simple in construction, easy to operate, safe and durable in use, and which may be manufactured economically. Other objects and advantages of this utility model will be fully

understood upon reading the following detailed description taken in conjunction with the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS:

Figure 1 is a perspective exploded view of a tire sealant container in accordance
5 with the present utility model;

Figure 2 is a fragmentary view showing the container in closed position;

Figure 3 is fragmentary view showing the dip tube being pulled-out from the container body;

Figure 4 is another fragmentary view of Figure 3 but with the plug member remove
10 from the dip tube;

Figure 5 is a partly sectional view showing the dip tube fitted to the valve stem (without the valve core); and

Figure 6 is a fragmentary perspective view showing the tire sealant container being used when injecting the sealant into the tire.

15 DETAILED DESCRIPTION OF THE UTILITY MODEL:

Referring now to the drawings in detail wherein like reference numerals designate same parts throughout, there is shown the present utility model for a tire sealant container generally designated as 1. Tire sealant container 1 which is preferably made of plastic material is adapted to be fitted to a tire valve "V" (without the valve core) for injecting a
20 sealant into a tire "T" in Figure 5. Tire sealant container 1 comprises a container body 2 and a cap 3 screwably mounted on an open top end of the container body 2. Cap 3 is

provided with a hole 4 at a mid-portion thereof. A dip tube 5 slidably received in the hole 4 and an annular flange 6 of dip tube 5 formed at a lower end thereof. The annular flange 6 abutting an inner surface of the container body 2 and serving as a stopper to prevent the dip tube 5 from being completely pulled out of the container body 2.

5 When the dip tube 5 is pulled out when in used, the annular flange 6 is engaged with the bottom surface of the cap 3 thus preventing the dip tube 5 from totally pulling out from the container body 2. A plug element 7 inserted in an open top end of said dip tube 5. The plug element 7 adapted to cover said dip tube 5. The plug element 7 being defined by a ledge 8. A serrated plug member 9 protruding from the bottom surface of said ledge
10 8.

 When using the tire sealant container 1 in injecting a sealant into a tire, the valve core is conventionally removed from the valve stem of the tire valve. Dip tube 5 is pulled out from the container body 2 and the plug element 7 is removed from the dip tube 5. Dip tube 5 is then inserted to the valve stem of tire valve "T" and the sealant can be injected
15 into the tire "T" by pressing the container body 2 thus creating pressure within the container body 2 pumping the sealant from the container body 2 into the tire "T".