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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF  
DANGEROUS GOODS AND ON THE GLOBALLY  
HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the  
Transport of Dangerous Goods

Thirty-first session  
Geneva, 2-6 July 2007  
Item 3 of the provisional agenda

**LISTING, CLASSIFICATION AND PACKING**

Classification of Bitumen

Transmitted by Eurobitume

**Introduction**

1. The objective of Eurobitume, the European Bitumen Association, is to disseminate to all interested persons and organisations technical and scientific knowledge concerning bitumen and its applications by

- (a) Promoting the effective and efficient uses of paving and industrial bitumen;
- (b) Acting as a focal point and spokesman for the European Bitumen Industry.

**Issue summary**

2. Eurobitume members have expressed concern that the current listings applicable to bitumen in the International Maritime Dangerous Goods (IMDG) Code can lead to confusion in respect of transport hazard classification and needless increase of transport cost as a consequence. Refined bitumen is a complex hydrocarbon substance derived from crude oil and must not be confused with natural asphalts or coal derived tar products. Currently there are three UN numbers which can be used for transport of bituminous materials:

UN Number	Description	Class
1999	TARS, LIQUID, including road asphalt and oils, bitumen and cutbacks	3 (Flammable)
3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flash point above 60 °C, at, or above its flash point	3 (Flammable)
3257	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flashpoint (including molten metals, molten salts etc.)	9 (Miscellaneous)

### Reasons for the proposed change

3. From the above table it is conceivable that hot bitumen could be transported under either UN number 1999, or 3257; the principle difference being the hazard classification (column 3). However, bitumen per-se does not meet the criteria for classification as a flammable material and therefore the use of UN1999 for transport of bitumen overstates the hazard, thereby potentially increasing transport costs and providing incorrect information in the event of an emergency.

4. For transport of cutback bitumens (bitumens diluted or softened with solvents) UN1999, or 3256 could be applicable, depending upon whether they are transported hot or cold.

5. Asphalt is the term used for bitumen in the United States of America and some other countries. In Europe and some other countries the word Asphalt (or road asphalt) refers to a mixture of bitumen and aggregate, sand and filler. In either case the products would not meet the transport criteria for flammability classification.

6. Applicable European standards for bitumens are as follows:

- EN 12591; Bitumen and bituminous binders - Specifications for paving grade Bitumens;
- EN 13924; Hard paving Grade Bitumens;
- EN 14023; Polymer Modified Bitumens;
- EN 13304; Oxidised Bitumens;
- EN 13305; Hard Grade Industrial Bitumens.

7. The minimum flashpoint for any grade of bitumen in the above standards is 160 °C, therefore bitumen does not meet the criteria for classification as a flammable liquid and the use of UN 1999 would be incorrect for bitumens per-se. Outside Europe the properties of equivalent products are similar to those of the European materials, in particular in respect of the criteria for flammability.

8. Cutback and fluxed bitumens have their own (provisional) European standard (prEN 15322) and should not therefore be considered as bitumens, but a separate class of products. Cutback bitumens are produced by blending bitumen with a volatile material, typically kerosene, which can lead to the resulting products being classified as flammable. The final classification in respect of flammability will depend upon the classification of the diluent used and the quantity thereof. The changes proposed will not restrict the transport of such materials.

### **Proposed change**

9. Eurobitume would like to propose that references to bitumen and road asphalt be removed from the description for UN1999 leaving this number for Tar, road oils and cutback products. The text for UN1999 should therefore be amended to read as follows:

**“TARS, LIQUID, including road oils, and cutbacks”.**

10. It is believed that most companies involved in the transport of hot bitumen already use UN3257 for bitumen and UN 3256 for (hot applied) cutbacks, therefore the proposed changes will not adversely affect current practices. Furthermore, Eurobitume has consulted with equivalent industry associations in Australia, South Africa and the United States and has received support for the proposed change.

11. This proposal will minimise changes to documentation, only requiring changes to incorrectly classified products and ensure that Bitumen products are not confused with Tar derived materials. In addition it will reduce the likelihood of misclassification of products and ensure that accurate information is available in the event of emergencies.

12. Eurobitume does not envisage that there would be any other consequential changes to the regulations resulting from the proposed change.

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