European LPG Industry Urges Extreme Caution
Road Tanker Thermal Coating in the RID/ADR Regulations

This document has been prepared by the AEGPL (European LPG Association) on behalf of its members, the European LPG Industry.

Background

There is currently a proposal being considered within the RID/ADR regulatory units to impose a requirement for a thermal coating to be applied to road transport tankers which carry a defined range of products including LPG. This proposal was produced with an aim to reduce the risk of BLEVE (boiling liquid expanding vapour explosion) incidents and/or reduce the impact of such events despite the current European experience that these events are extremely rare.

The European LPG Industry Position

The European LPG Industry believes that the proposal to apply thermal coating to LPG road tankers is not justified and could increase the overall safety risk associated with the transportation by road of LPG throughout Europe.

The effect of any imposition of this unproven technology to road tankers and the subsequent increase in road journeys will undoubtedly create additional risk within the European road network.

European LPG Industry Safety Heritage

The Industry has been delivering LPG throughout Europe for over 75 years and from its inception, the Industry has always put safety as its number one priority. Today, its safety record is world leading resulting from continuous improvement through smart regulation, technology and education. The main focus of the Industry's safety management system has been on the prevention of the accidents, as opposed to mitigation, that only reduces the severity of the consequences, after the accidents have taken place (the role of the thermal coating). By working with national and international bodies, effective and practical standards, procedures, and training programs have been developed, covering all aspects of our business. There is no greater evidence of the effectiveness of this approach than the Industry's record in Europe of risk reduction and BLEVE prevention.

BLEVE Mitigation Effects

Whenever an LPG tanker is exposed to fire, the emergency services use water to cool the tank and mitigate the risk of a BLEVE (mitigation refers to actions taken to control and minimise the consequences of an incident; mitigation is not related to incident prevention).

This standard method for all emergency services relies on the capability for the steel container to be cooled rapidly, most often accompanied by simultaneous measurement of the temperature of the tank by thermal imaging, to provide essential safety information and protect the firefighters. Although no records exist for how many BLEVES this simple and effective method has prevented, it has undoubtedly saved many lives over the history of the Industry.

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A tanker fitted with thermal coating, does not allow temperature measurement by thermal imaging and in addition, it also hinders significantly the usual visual checks of the condition of the tank surface during the emergency operations which generates uncertainty and further risks to fire brigade personnel.

The Industry also believes that further risks exist from parts of the thermal coating becoming detached during an incident, leading to hidden hotspots and potentially endangering further the firefighting staff. Thermal coatings would also hinder the currently applied rigorous testing and inspection regimes which rely on visual checks of the external tank condition.

Tank corrosion could occur beneath the coating undetected, thereby increasing the risk of failure.

The Industry's fundamental concern is that the discussion surrounding the application of thermal coating to LPG road tankers seeks to mitigate just one very rare event (BLEVE). The measure proposed will make no contribution to reducing the risks associated with the circumstances leading to such an event happening. The Industry believes that a range of integrated safety features have to be incorporated into the design of any road vehicle to minimise risks from many sources

Road Traffic Implications

A severe impact caused by a road accident could cause the failure of the tank shell (sometimes known as a cold BLEVE) or its equipment, resulting to total or partial loss of containment, without fire on the tank being a catalyst, and often with catastrophic consequences to the surroundings. Recent accidents have demonstrated the risk from this type of events much higher than those from a BLEVE. A thermal coating would not reduce the effects of such events.

The additional weight of the thermal coating will cause an increase of tanker movements throughout Europe. The Industry estimates this to be in the order of 5 to 7% with an equivalent increase in risk from all types of road transport incidents. The Industry has a good safety record in the transportation of LPG by road and has invested millions of euros in ever improving technology which includes methods to reduce the number of tanker movements. This thermal coating proposal would be a completely retrograde step in our ambition to minimise the Industry's footprint on Europe's roads.

Conclusion

For these reasons the European LPG Industry urges extreme caution by the RID/ADR Regulators and associated groups when discussing the thermal coating mitigation measure. The Industry has a long history of good cooperation with RID/ADR and together we can be proud of the improved safety performance of the LPG Industry in Europe.

The Industry would like to see this success continue and look forward to further discussions relating to BLEVE prevention which is too important an issue to be dealt with by the imposition of one unproven technology with many question marks still hanging over it.

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LPG: AN EXCEPTIONAL ENERGY

LPG is a clean and immediately available energy source which can be used practically anywhere

LPG (liquefied petroleum gases, also referred to as butane and propane) offers many advantages, both to end-users and to society as a whole.

With its dual origins - natural gas directly drawn from the earth, and crude oil refining - it already responds to the energy demands of more than 120 million EU citizens.

The fact that it can be easily liquefied makes LPG a highly versatile energy alternative and thanks to a wide variety of packaging and storage options, LPG has numerous fuelling applications: LPG can be used for:

- Space and water heating
- Cooking
- Lighting
- Power generation
- Industrial processing and heating
- Automotive fuelling

LPG is an immediately available low carbon alternative. Indeed, it emits 35% less CO_2 than coal and 12% less than oil. It also emits almost no black carbon, arguably the second biggest contributor to global warming.
LPG offers significant environmental advantages, particularly in terms of indoors and outdoor air quality. It is characterized by low particle emissions, low NOx (nitrogen oxide) emissions and low sulphur content

http://www.aegpl.eu/lpg-an-exceptional-energy.aspx

About AEGPL (The European LPG Association)

AEGPL is the sole representative of the LPG industry at European level, representing national LPG Associations as well as distributors and equipment manufacturers from across Europe. Our mission is to engage with EU decision-makers and the wider policy community in order to optimise the contribution that LPG - as a clean and immediately available energy source - can make to meeting Europe's energy and environmental challenges.

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