

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Safety Committee and the
Working Party on the Transport of Dangerous Goods
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DANGEROUS GOODS TRANSPORT SECURITY

Transmitted by the European Fertilizer Manufacturers Association (EFMA)

PROPOSAL TO TABLE 1.X.1

Related documents: **TRANS/WP.15/AC.1/2003/49**
 TRANS/WP.15/AC.1/2003/22; INF 25
 TRANS/WP.15/AC.1/92/Add.2
 TRANS/WP.15/AC.1/92

Introduction

New UN recommendations concerning security have been proposed for certain “high consequence dangerous goods”. **Ammonium nitrate fertilizers (dangerous goods Division 5.1) in bulk**, are included in the **indicative** list of “high consequence dangerous goods”, together with explosives, toxic and flammable gases, and other materials.

For the reasons described below, EFMA proposes to exclude the ammonium nitrate based fertilisers from the table 1.X.1 and supports the similar proposal made by the experts from Belgium.

The safety of ammonium nitrate based fertilizers in Europe

Ammonium nitrate based fertilizers falling in Division 5.1 are covered by UN number 2067. They include a variety of fertilizer products e.g. ammonium nitrate, mixtures containing ammonium nitrate, inert materials, limestone/dolomites, ammonium sulphate or phosphate/potash. These products are not comparable to the other substances on the list of “high consequence dangerous goods”. They do not constitute a direct hazard, but require considerable alteration to become dangerous.

Ammonium nitrate fertilizers are neither explosive nor flammable in themselves. Even as oxidisers, they are not particularly powerful; they do not fully meet the test criteria and are placed in Packing Group III based on experience/convention. Under normal storage and transport conditions, they are stable and safe products and do not generate special risks. The transport safety record of these products has been excellent since they came into production in large quantities more than 50 years ago.

In addition to the provision of safeguards associated with the classification as oxidisers, these products are already subjected to further testing regime, as described below, to avoid a mass explosion hazard.

-When transported in bulk (i.e. in unpackaged form) by sea the IMDG rules require them to pass a severe Resistance to Detonation test (Test D.5 in the Bulk Cargo Bulletin).

-Fertilizer products, which contain >80% ammonium nitrate are subject to an identical test in the European Union to minimise the risk of detonation. Thus, the more sensitive forms of ammonium nitrate such as the porous grade cannot be traded as fertilizers.

-Straight ammonium nitrate fertilizers containing >80% ammonium nitrate are subject to further safety related criteria in EU to minimise the risk of detonation, these include

1. porosity, to limit the possibility for oil absorption
2. very low level of combustible ingredients
3. pH (at least 4,5 in a specified solution)
4. particle size, to limit the extent of small particles
5. very low level of chlorine content
6. very low level of copper content

The risk of detonation from act of terrorism

From the standpoint of terrorism risk, mainly products containing high levels of ammonium nitrate are relevant. Products of this type in Europe are of high density, of low porosity and are stabilized by means of special additives, such as magnesium nitrate. As a result, oil, if added, is not absorbed by the fertilizer particles, making the product unsuitable for explosive purposes. As explained above, these products have a high resistance to detonation, which has been clearly seen in some industrial accidents.

Practical Aspects

Millions of tonnes of these Ammonium nitrate based fertiliser products are produced or imported annually in Europe and transported to merchants/distributors and thence to farms. This involves a large number of deliveries and at times collection by farmers. Some of the security provisions specified in the proposals are impractical for the above movements.

EFMA Proposal

Ammonium nitrate fertilisers in bulk should be removed from the indicative list of high consequence dangerous goods, as there are other safeguards in place to minimise the risk of explosion and there would be severe practical difficulties in subjecting fertilisers to the new security requirements.
