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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

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Item 4 of the agenda

NEW PROPOSALS OF AMENDMENT TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Aluminium witness screens used in Series 6(c) Testing

Availability of specified aluminium sheets

Transmitted by the expert from Australia

SCOPE

This proposal aims to recommend:

- i. Amendments to Section 16.6.1.2.(g) of the Manual of Tests and Criteria (Forth revised edition) with regards to the specifications for aluminium witness screens.

Introduction

1. Section 16.6.1.2.(g) of the Manual of Tests and Criteria (Forth revised edition) specifies that witness screens used in series 6(c) [External Fire (Bonfire) Test] should be 1100-0 aluminium sheets of Brinell Hardness 23 with a tensile strength of 90MPa. This specification is not in common use and as a result compliant aluminium sheets cannot be sourced for tests conducted in Australia. It appears this material is only available on special order from Norway and with a minimum order quantity of 4m³.
2. It is unrealistic to expect testing authorities to use a material that is not, in reality, available. As a result series 6(c) testing in Australia is being conducted using aluminium sheets that are of a softer material. As an example 2mm thick 1150 Aluminium sheets have been used. These are a close match to the specification.

Proposal

3. It is recommended that section 16.6.1.2.(g) be modified either:
 - i. Replace 1100-0 aluminium sheets of Brinell Hardness 23 with a viable specification; or
 - ii. Permit the use of a specified viable alternative.
4. Australia recommends the adoption of a viable alternative employing a matrix that relates thickness of the material to the Brinell hardness in order to provide a range of options that will give the same result as employing the 1100-0 aluminium sheets of Brinell Hardness 23 specified. Using materials that are close to the 1100-0 but do not provide the same susceptibility to indentation and penetration means tests will not be consistent and confidence cannot be maintained in the results. A realistic specification must be adopted in order that all tests are conducted on a consistent basis.