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INLAND TRANSPORT COMMITTEE
Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods

Ad hoc Working Group on the Harmonization of RID/ADR/ADN
with the UN Recommendations on the Transport of Dangerous Goods

Geneva, 24-26 April 2013

Harmonization with the United Nations Model Regulations on the Transport of Dangerous Goods

Amendments to 2.2.3.1.4

2.2.3.1.4 Amend to read as follows:

"2.2.3.1.4 Viscous flammable liquids such as paints, enamels, lacquers, varnishes, adhesives and polishes having a flash-point of less than 23 °C may be placed in packing group III in conformity with the procedures prescribed in the Manual of Tests and Criteria, Part III, sub-section 32.3, provided that:

(a) The viscosity expressed as the flowtime in seconds and flash-point are in accordance with the following table:

*Flow-time **t** in seconds*	*Jet diameter (mm)*	*Flash point, closed-cup (°C)*
$20 < t \leq 60$	4	above 17
$60 < t \leq 100$	4	above 10
$20 < t \leq 32$	6	above 5
$32 < t \leq 44$	6	above -1
$44 < t \leq 100$	6	above -5
$100 < t$	6	no limit

(b) Less than 3% of the clear solvent layer separates in the solvent separation test;

(c) The mixture or any separated solvent does not meet the criteria for Division 6.1 or Class 8;

[(d) The substances are packed in receptacles of not more than 450 litre capacity.]

NOTE: *These provisions also apply to mixtures containing no more than 20% nitrocellulose with a nitrogen content not exceeding 12.6% (by dry mass). Mixtures containing more than 20% but not more than 55% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass are substances assigned to UN No. 2059.*

Mixtures having a flash-point below 23 °C and containing:

- more than 55% nitrocellulose, whatever their nitrogen content; or

- not more than 55% nitrocellulose with a nitrogen content above 12.6% by dry mass,

are substances of Class 1 (UN Nos. 0340 or 0342) or of Class 4.1 (UN Nos. 2555, 2556 or 2557).”.

Alternative: Keep existing text.

“2.2.3.1.4 Liquid or viscous mixtures and preparations, including those containing no more than 20% nitrocellulose with a nitrogen content not exceeding 12.6% (by dry mass), shall be assigned to packing group III only if the following requirements are met:

(a) the height of the separated layer of solvent is less than 3% of the total height of the sample in the solvent-separation test (see Manual of Tests and Criteria, Part III, sub-section 32.5.1); and

(b) the viscosity[2] and flash-point are in accordance with the following table:

Kinematic viscosity (extrapolated) ν (at near-zero shear rate) mm^2/s at 23 °C	Flow time t in accordance with ISO 2431:1993		Flash-point in °C
	in s	Jet diameter in mm	
20 < ν ≤ 80	20 < t ≤ 60	4	above 17
80 < ν ≤ 135	60 < t ≤ 100	4	above 10
135 < ν ≤ 220	20 < t ≤ 32	6	above 5
220 < ν ≤ 300	32 < t ≤ 44	6	above -1
300 < ν ≤ 700	44 < t ≤ 100	6	above -5
700 < ν	100 < t	6	-5 and below

NOTE: *Mixtures containing more than 20% but not more than 55% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass are substances assigned to UN No. 2059.*

[2] *Viscosity determination: Where the substance concerned is non-Newtonian, or where a flow cup method of viscosity determination is otherwise unsuitable, a variable shear-rate viscometer shall be used to determine the dynamic viscosity coefficient of the substance, at 23 °C, at a number of shear rates. The values obtained are plotted against shear rate and then extrapolated to zero shear rate. The dynamic viscosity thus obtained, divided by the density, gives the apparent kinematic viscosity at near-zero shear rate.*

Mixtures having a flash-point below 23 °C and containing:
- *more than 55% nitrocellulose, whatever their nitrogen content; or*
- *not more than 55% nitrocellulose with a nitrogen content above 12.6% by dry mass,*

are substances of Class 1 (UN Nos. 0340 or 0342) or of Class 4.1 (UN Nos. 2555, 2556 or 2557).".

Amendments to 2.2.3.1.5

2.2.3.1.5 Amend to read as follows:

"2.2.3.1.5 Viscous liquids which:

- have a flash point of 23 °C or above and less than or equal to 60 °C;
- are not toxic, corrosive or environmentally hazardous;
- contain not more than 20% nitrocellulose provided the nitrocellulose contains not more than 12.6% nitrogen by dry mass; and
- are packed in receptacles of not more than 450 litre capacity;

are not subject to RID/ADR/ADN, if:

(a) in the solvent separation test (see *Manual of Tests and Criteria*, Part III, sub-section 32.5.1), the height of the separated layer of solvent is less than 3% of the total height; and

(b) the flowtime in the viscosity test (see Manual of Tests and Criteria, Part III, sub-section 32.4.3), with a jet diameter of 6 mm is equal to or greater than:

(i) 60 seconds; or

(ii) 40 seconds if the viscous substance contains not more than 60% of Class 3 substances.".

Alternative: Keep the existing text as amended:

"2.2.3.1.5 Non-toxic, non-corrosive and non-environmentally hazardous solutions and homogeneous mixtures having a flash-point of 23 °C or above (viscous ~~substances~~liquids, such as paints or varnishes, excluding substances containing more than 20% nitrocellulose) packed in receptacles of ~~less~~ not more than 450 litres capacity, are not subject to ADR if, in the solvent-separation test (see Manual of Tests and Criteria, Part III, sub-section 32.5.1), the height of the separated layer of solvent is less than 3% of the total height, and if the substances at 23 °C have, in the flow cup conforming to ISO 2431:1993 having a jet 6 mm in diameter, a flow time of:

(a) not less than 60 seconds; or

(b) not less than 40 seconds and contain not more than 60% of substances of Class 3.".