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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****Forty-first session**

Geneva, 25 June – 4 July 2012

Item 3 (b) of the provisional agenda:

**Listing, classification and packing: miscellaneous****Sub-Committee of Experts on the Globally Harmonized  
System of Classification and Labelling of Chemicals****Twenty-third session**

Geneva, 4 – 6 July 2012

Item 2(a) of the provisional agenda

**Updating the Globally Harmonized System of  
Classification and Labelling of Chemicals:  
physical hazards****Amendments to the classification flow chart/decision logic for  
self-reactive substances and organic peroxides****Transmitted by the International Council of Chemical Associations  
(ICCA)<sup>1</sup>****Introduction**

1. During the last meetings of the Sub-Committee of Experts on the transport of Dangerous Goods (TDG Sub-Committee) and the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee), a proposal for amendment to the classification flow chart for organic peroxides and self-reactive substances was discussed (ST/SG/AC.10/C.3/2011/29–ST/SG/AC.10/C.4/2011/5).

2. In the proposal, two alternatives were proposed:

- (a) a change of the classification in such a way that all existing classification elements in the Model Regulations and in the GHS were incorporated in the proposed flow chart and

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<sup>1</sup> In accordance with the programme of work of the Sub-Committee for 2011–2012 approved by the Committee at its fifth session (refer to ST/SG/AC.10/C.3/76, para. 116 and ST/SG/AC.10/38, para. 16).

(b) in addition to (a), the classification of liquid organic peroxides/self-reactive substances Type G, as Type F as soon as they are transported or handled in Intermediate Bulk Containers (IBC) or tanks.

3. There was a long discussion on the last alternative proposal. The classification of solids in larger quantities (IBCs and tanks) was discussed as well as a number of other complicated issues that are already under discussion for many years in expert groups like the Working Group on Energetic and Oxidizing Substances (EOS) of the International Group of Experts on the Explosion Risks of Unstable Substances (IGUS).

4. It was never the aim of ICCA to resolve all these issues in the proposal. Therefore ICCA withdrew the complicated proposal (i.e. the one that included changes in classification principles) and promised to come back with a new proposal that would address only the aspects of classification elements that already exist in the current version of the Model Regulations and the GHS.

## I. Backgrounds to the proposal

5. It was observed that various issues that determine the classification of substances or mixtures are addressed in the text of the Model Regulations and the GHS, but are not incorporated in the flow chart. These aspects can easily be overlooked by users not so familiar with the detailed text. As they are part of the classification procedure, it is more appropriate to include them in the classification flow charts for both self-reactive substances and organic peroxides. These flow charts are identical.

6. It was agreed during the last IGUS-EOS meeting that ICCA would prepare a proposal to both subcommittees (TDG and GHS).

7. The following aspects are addressed in the text of the Model Regulations and the GHS but are not incorporated in the classification flow charts:

(a) no type G classification possible if the Self-accelerating decomposition temperature (SADT) of the substance is  $< 60\text{ }^{\circ}\text{C}$  in a 50 kg packaging (see Model regulations paragraphs 2.4.2.3.3.2 (g) and 2.5.3.3.2 (g) and GHS paragraphs 2.8.2.2 (g) and 2.15.2.2 (g))

(b) no type G classification possible when a diluent is used with a boiling point  $< 150\text{ }^{\circ}\text{C}$  (see Model regulations paragraphs 2.4.2.3.3.2 (g) and 2.5.3.3.2 (g) and GHS paragraphs 2.8.2.2 (g) and 2.15.2.2 (g))

8. In the proposed amended flow chart these two aspects are addressed in the new boxes 14 and 15 respectively. The introduction of these boxes will not lead to a change in the existing classification principles.

## II. Proposals

9. Based on the background given in section II of this document (no change in classification principles) the following is proposed (changes are shown in grey shading):

(a) In the Chapters 2.4 and 2.5 of the Model Regulations replace Figures 2.4.1 and 2.5.1 by the following:

Figure 2.4.1: FLOW CHART SCHEME FOR SELF-REACTIVE SUBSTANCES

Figure 2.5.1: FLOW CHART SCHEME FOR ORGANIC PEROXIDES

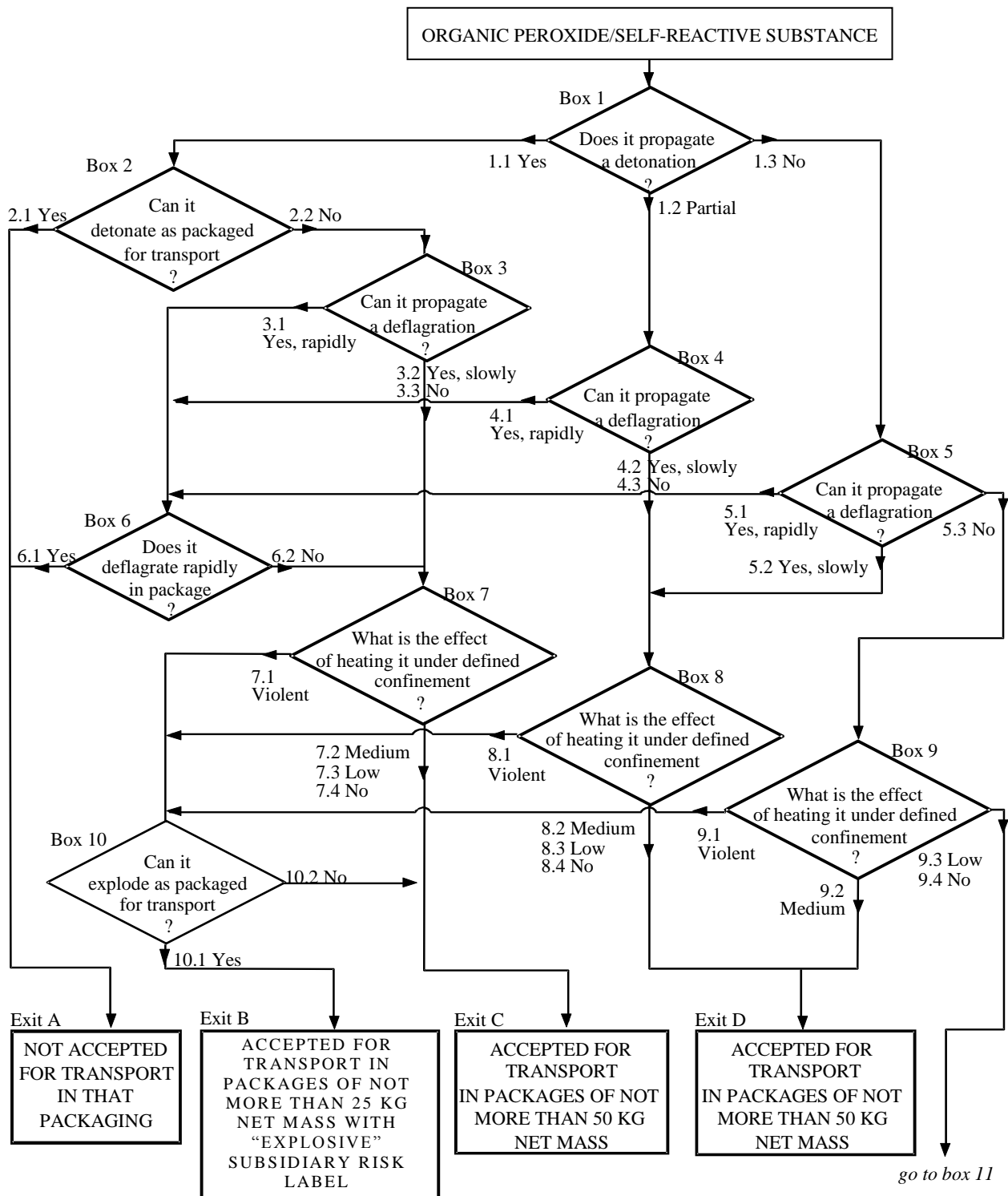
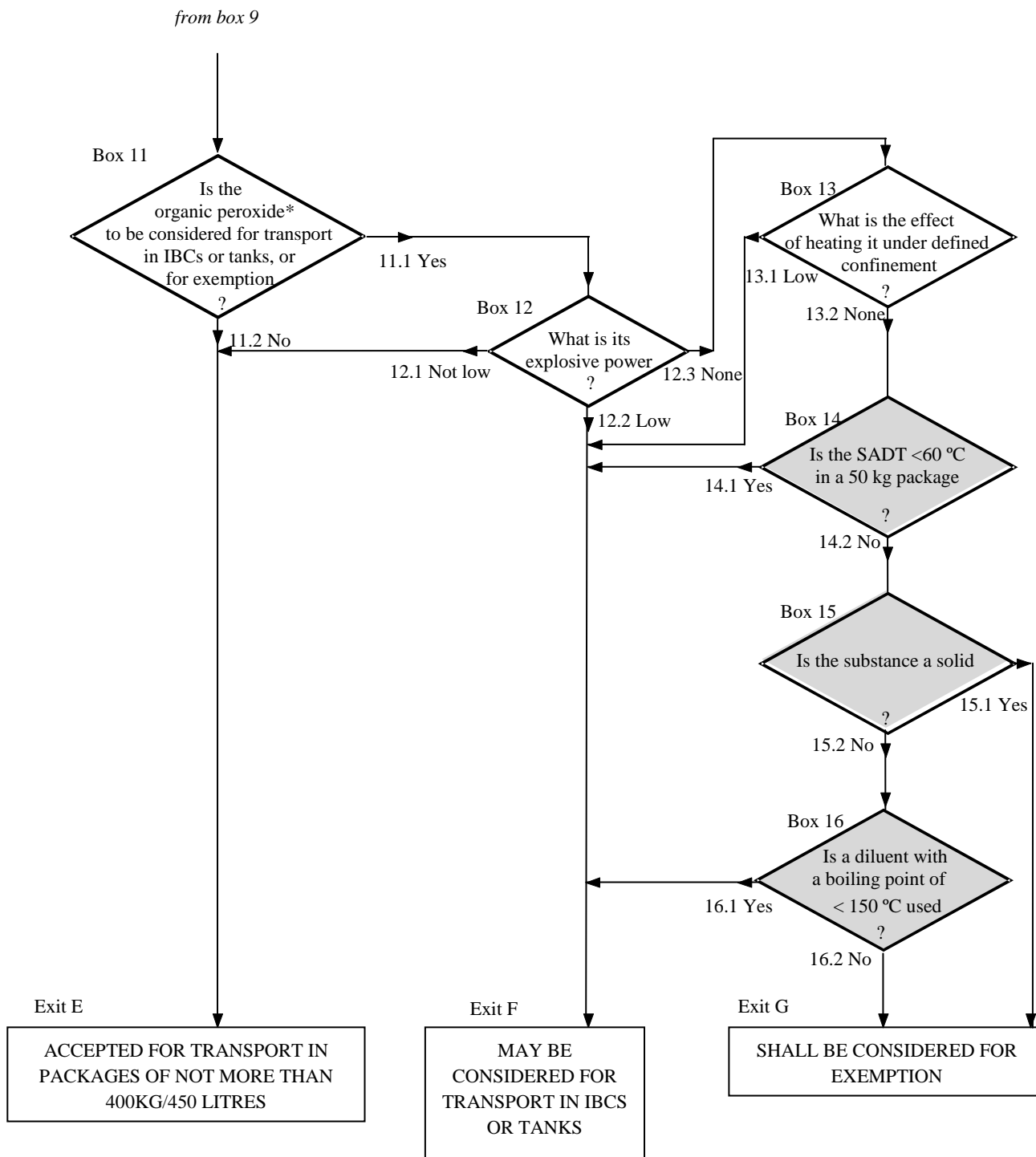


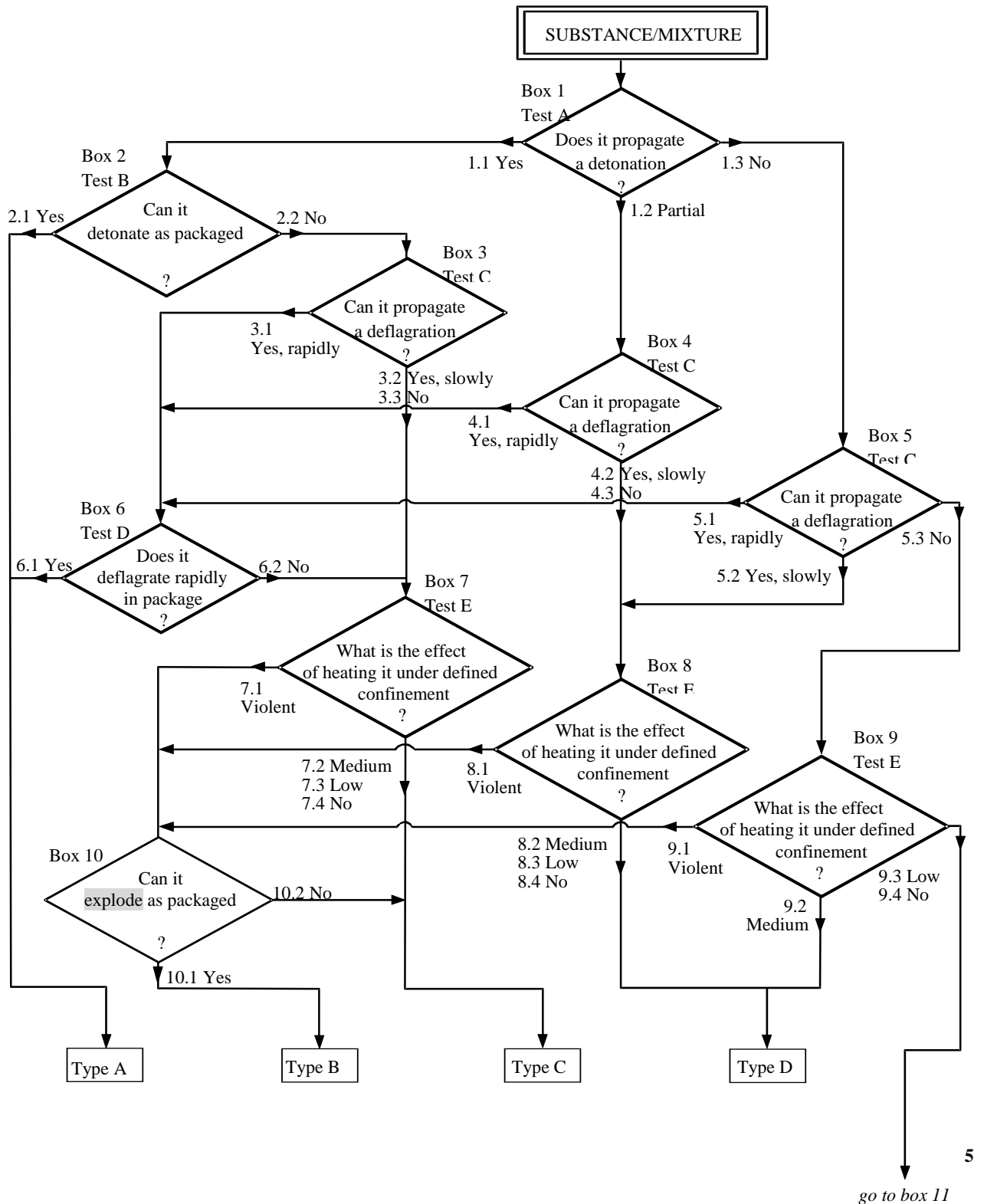
Figure 2.4.1: FLOW CHART SCHEME FOR SELF-REACTIVE SUBSTANCES (cont'd)  
 Figure 2.5.1: FLOW CHART SCHEME FOR ORGANIC PEROXIDES (cont'd)



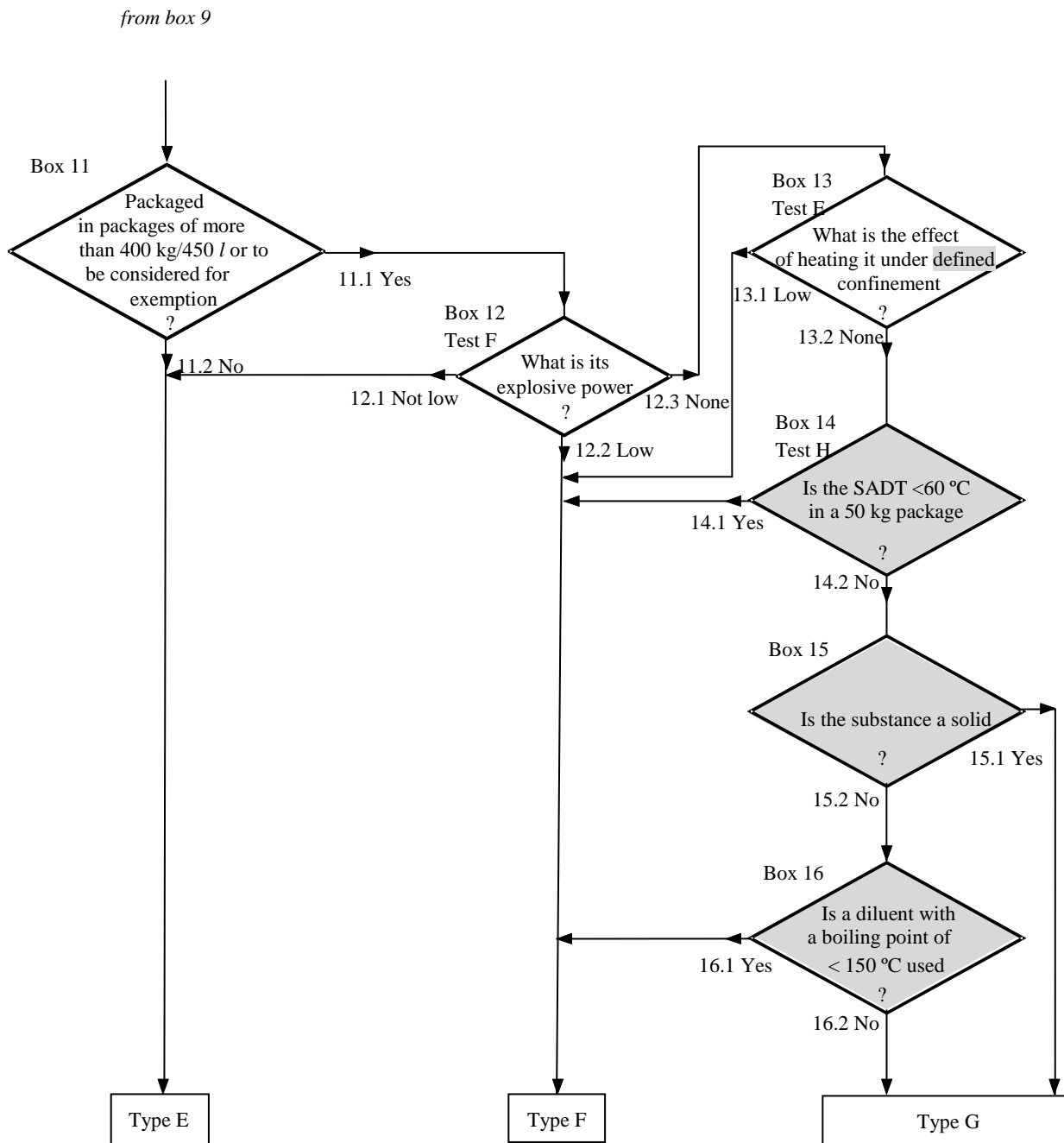
\* Respectively "self-reactive substance"

(b) In Chapters 2.8 and 2.15 of the GHS replace decision logics 2.8 and 2.15 by the following:

Decision logic 2.8 for self-reactive substances and mixtures  
Decision logic 2.15 for organic peroxides



Decision logic 2.8 for self-reactive substances and mixtures (cont'd)  
 Decision logic 2.15 for organic peroxides (cont'd)



(Note: the grey shaded wording in boxes 10 and 13 are just corrections.)

### **III. Consequential amendments**

10. When proposal is adopted, the following flow charts have to be amended accordingly:

- In the Manual of Tests and Criteria the flow chart given in Figure 20.1 (b)

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