**9Summary of papers to be discussed at the 58th session of the UN TDG Sub-Committee 29 November – 8 December 2021**

**Link to repository for all documents for ECOSOC Sub-Committee of Experts on the Transport of Dangerous Goods (59th session)** [**https://unece.org/info/Transport/Dangerous-Goods/events/354454**](https://unece.org/info/Transport/Dangerous-Goods/events/354454)

| **Paper** | **Issue** | **Do you agree with what has been proposed?** | **Comments** |
| --- | --- | --- | --- |
| **1. Adoption of the agenda** |
|  |  |  |  |
| **2. Explosives and related matters** |
| **2(a) Review of test series 6** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(b) Improvement of test series 8** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(c) Review of tests in parts I, II and III of the Manual of Tests and Criteria** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(d) ‘UN’ standard detonators** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(e) Review of packing instructions for explosives** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(f) Energetic samples** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(g) Issues relating to the definition of explosives** |
| At the time of writing no document has been submitted under this agenda sub-item |  |  |  |
| **2(h) Review of packaging and transport requirements for ANEs** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **2(i) Miscellaneous**  |
| **ST/SG/AC.10/C.3/2021/34 (Chair of the Working Group on Explosives)** [**Link**](https://unece.org/sites/default/files/2021-08/ST-SG-AC.10-C.3-2021-34e_0.docx)Amendment and correction to the Manual of Tests and Criteria | When going through the Manual of Tests and Criteria a member of the explosives working group noted a mistake in two equations in Appendix 10, paragraph A10.2.3.8. The equations now assume that always a mass of 1 gram nitrocellulose is used in the analysis, whereas the test description also mention amounts of 2 and 3 grams. The equations should be corrected accordingly. It should be noted that in section A10.2.4.1 the criterion is expressed in ml/g, so the proposed change is consistent with the criterion.Both corrections are addressed in the report of the working group including proposals. However, since there was no written document on these two issues, the Sub-Committee requested the chair of the working group to address these two corrections in a document for the fifty-ninth session.**Proposals** **Proposal 1**Specification of silicone oil:In sections 11.5.1.2.2 (1 (b) test), 12.5.1.2.2 (2 (b) test), 18.6.1.2.2 (8 (c) test), 25.4.1.2.2 (test E.1), 25.4.2.2.2 (test E.2), 28.3.6 (test series H), 28.4.2.3.1 (test H.2) amend the specification as follows (deleted text in strikethrough and new text in bold):“… ~~apparent~~ density 0.96 ± 0.02 **g/cm3** at 20 °C…” **Proposal 2**Appendix 10:In A10.2.3.8, delete the last part of the equation “= CNaOH x 0.224” as follows:$$V\_{NO}=\frac{c\_{NaOH }×C\_{NaOH }×V\_{NO,m }}{m\_{NC}}= \frac{C\_{NaOH }×0.224}{m\_{NC}}=C\_{NaOH }×0.224$$Replace the next equation as follows:

|  |  |
| --- | --- |
| $$V\_{NO}=C\_{NaOH }×2.2$$ | $$V\_{NO}=\frac{C\_{NaOH }×2.24}{m\_{NC}}$$ |

 |  |  |
| **ST/SG/AC.10/C.3/2021/36 (Cefic)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-36e.docx)Introduction of a new entry for 5-Trifluoromethyltetrazole, sodium salt (TFMT-Na) in Acetone as a desensitized explosive in the Dangerous Goods List of the Model Regulations58th session – [INF.21](https://unece.org/sites/default/files/2021-06/UN-SCETDG-58-INF21e.docx)  | The paper furthers the discussion initiated at the 58th session in INF.21Trifluoromethyltetrazole, sodium salt (TFMT-Na) is a precursor for a new insecticide entering the market. Due to the explosive properties of the dry substance, it is only handled and transported as a homogenous solution in acetone. As sourcing involves international transport from different countries, Cefic proposes the creation of an entry as a desensitized explosive in the Dangerous Goods List in 3.2.2 of the UN Model Regulations. Annexes to the paper contain detailed test reports and data sheets which underpin the proposal. **Proposal**1. In 3.2.2 Dangerous Goods List create an entry as follows:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UN No. | Name and description | Class or division | Subsi-diary hazard | UN packing group | Special provi-sions | Limited and exepted quantities | Packagings and IBCs | Portable tanks and bulk containers |
| Packing instruction | Special packing provisions | Instructions | Special provisions |
| (1) | (2) | (3) | (4) | (5) | (6) | (7a) | (7b) | (8) | (9) | (10) | (11) |
| XX | TRIFLUOROMETHYLTETRAZOLE-SODIUM SALT IN ACETONE, with not less than 68 % acetone, by mass | 3 |  | I | 28, 132, 266 | 0 | E0 | PYYY | PP26 |  |  |

1. In 2.3.1.4 amend the last sentence to read as follows (new text in bold underlined):

“Entries in the Dangerous Goods List for liquid desensitized explosives are: UN 1204, UN 2059, UN 3064, UN 3343, UN 3357**,** ~~and~~ UN 3379 **and UN XX**.”1. In 3.3.1 modify special provision 28 to read as follows:

“This substance may be transported **as a desensitized explosive** under the provisions of **class 3 or** division 4.1**, respectively** only if it is so packed that the percentage of diluent will not fall below that stated, at any time during transport (see **2.3.4.1 and** 2.4.2.4).”1. In 4.1.4.1 create a new packing instruction PYYY as follows:

|  |
| --- |
| PYYY PACKING INSTRUCTION PYYY |
| This instruction applies to UN No. XX |
| The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 as well as 4.1.5.12 are met:1. Plastics drum non-removeable head (1H1) of maximum capacity 250 l
2. Combination packagings Outer packagings: 4C2, 4D, 4F, 4Ga, 4H1, 4H2 with a maximum content of 2 litres

 Inner packagings: glass inner packagings with a maximum net content of 1 litre cushioned on all sides with dry, absorbent, non-combustible material in a quantity sufficient to absorb the entire contents.a Packagings shall be siftproof |
| **Additional requirements:**Packagings shall be designed and constructed to prevent the loss of the content of the phlegmatizer.The packagings shall be transported in an upright position. |
| **Special packing provisions:****PP26** For UN No. XX packagings shall be lead free. |

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| **3. Listing, classification and packing** |
| **ST/SG/AC.10/C.3/2021/33 (Cefic)** [**Link**](https://unece.org/sites/default/files/2021-08/ST-SG-AC.10-C.3-2021-33e.docx)Organic peroxides: new formulations to be listed in 2.5.3.2.4 and packing instruction IBC520 | This paper proposes additions and amendments to 2.5.3.2.4 and packing instruction IBC520 to include new organic peroxide formulations. The paper also proposes the reclassification Di-2,4-Dichlorobenzynol peroxide (from Type D to Type C organic peroxide) based on new test data.**Proposals****Proposed amendments to 2.5.3.2.4 List of currently assigned organic peroxides:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ORGANIC PEROXIDE** | **Concentration (%)** | **Diluent type A (%)** | **Diluent type B 1) (%)** | **Inert solid (%)** | **Water(%)** | **Packing Method** | **Control temperature (°C)** | **Emergency temperature (°C)** | **Number (Generic entry)** | **Subsidiary risks and remarks** |
| **Change** DI-2,4-DICHLOROBENZOYL PEROXIDE | ≤ 52 as a paste with silicon oil |  |  |  |  | **Change**OP7 to OP5 |  |  | **Change**3106 to 3104 |  |
| **Add to the list**METHYL ETHYL KETONE PEROXIDE(S) | Remark 33) | ≥ 41 |  |  | ≥ 9 | OP8 |  |  | 3105 | 33) 34) 35) |
| **Add to the list**2,5-DIMETHYL-2,5-(tert-BUTYLPEROXY) HEXANE | ≤ 22 |  |  | ≥ 78 |  |  |  |  | Exempt | 29) |
| **Add to the list**DIBENZOYL PEROXIDE | ≤ 42 | ≥ 38 |  |  | ≥ 13 | OP8 |  |  | 3109 |  |

Add the following new Notes to 2.5.3.2.4:*33) Available oxygen ≤ 10 %**34) Sum of diluent type A and water being ≥ 55 %**35) With ≥ 41 % diluent Type A by mass, and in addition methyl ethyl ketone***Proposed amendments to 4.1.4.2, Packing Instruction IBC520**Add IBC type 31HA1 to the existing entry as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UN No.** | **Organic peroxide** | **Type of IBC** | **Maximum quantity (litres)** | **Control temperature** | **Emergency Temperature** |
| **3119** | ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED |  |   |   |   |
| **ADD to the existing entry:**  |
| Di-(3,5,5-trimethylhexanoyl) peroxide, not more than 52 %, stable dispersion, in water | 31HA1 | 1000 | +10 ºC | +15 ºC |

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| **ST/SG/AC.10/C.3/2021/39 (COSTHA)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-39e.docx)New UN entry for Quinone dioxime (also known as 1,4-benzoquinone dioxime, or p-benzoquinone dioxime; CAS no. 105-11-3) | Quinone dioxime (QDO; Chemical Abstracts Service (CAS) no. 105-11-3) is a solid that is manufactured worldwide by some forty companies and is variously classified as unregulated or as Division 4.1, packing group PG II or PG III as confirmed by the current European Chemicals Agency (ECHA) classification data.Uncertainty over the classification of QDO has recently arisen based on REACH testing showing QDO to meet criteria in test series 6(c). More than likely, many substances classified as flammable liquids or flammable solids demonstrate more severe or similar burning behaviour than that of QDO, especially when evaluated by thermal flux alone.The proposal in the paper is based detailed information on the uses and properties of QDO, test data and other evidence which can be found in the paper.**Proposal**Based on the information contained in the paper, it is proposed to amend the 3.2 Dangerous Goods List by introducing a new Division 4.1 UN entry for QDO, as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| UN No. Substance  | Class  | Subsidiary Hazard  | UN packing group  | Special provisions  | Limited and excepted quantities  | Packagings and IBCs  | Portable tanks and bulk containers  |
| Packing instruction  | Special packing provisions  | Instructions  | Special provisions  |
| UN XXXXQUINONE DIOXIME | 4.1  |   | II  |  | 1 kg | E2 | P002  |  |  |  |

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| **ST/SG/AC.10/C.3/2021/48 (Spain)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-48e.docx)Transport conditions for UN 2426 Ammonium nitrate58th session [ST/SG/AC.10/C.3/2021/21](https://unece.org/sites/default/files/2021-04/ST-SG-AC.10-C.3-2021-21e.docx) | This paper continues on from the discussions at the 58th session regarding the transport conditions for UN 2426 Ammonium nitrate. Special provision 252 gives indications on when the material is not dangerous enough to be covered by the regulations. Nevertheless, for the case when this material falls under the regulations, it does not impose any transport conditions or limitations. This paper proposes to review this to see if it is necessary to include limitations on the transported solution.**Proposal**Spain included into this proposal the editorial amendments received and proposes to modify special provision 252 as follows (new text is underlined):“SP 252 Provided the ammonium nitrate remains in solution under all conditions of transport, aqueous solutions of ammonium nitrate, with not more than 0.2 % combustible material, in a concentration not exceeding 80 %, are not subject to these Regulations if they do not fulfil the conditions for any other class.This substance is admitted for transport, provided that:(a) The solution does not contain more than 93 % ammonium nitrate;(b) The solution shall contain at least 7 % of water;(c) The solution does not contain more than 0.2 % combustible material;(d) The solution does not contain chlorine compounds in quantities such that the chloride ion level exceeds 0.02 %;(e) The pH is between 5 and 7 measured at 25 ºC in aqueous solution of 10 % of the substance carried; and (f) The maximum allowable transport temperature of the solution shall be 140 ºC.”.Please refer to the paper for more information on the background and justification for the proposal |  |  |
| **ST/SG/AC.10/C.3/2021/52 (China)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-52e.docx)Reviewing the location of the UN specification marking | The Model Regulations (6.1.3.1) specifies the location of UN specification markings:“*6.1.3.1 Each packaging intended for use according to these Regulations shall bear marks which are durable, legible and placed in a location and of such a size relative to the packaging as to be readily visible. For packages with a gross mass of more than 30 kg, the marks or a duplicate thereof shall appear on the top or on a side of the packaging*. …”This allows packages to have a UN specification marking on their tops. However, in fact, the entire top of some packagings is a removable top head, such as 1G, 1A2, etc. If the UN specification marking is only marked on the head, this could lead to a head being placed on an incorrect package, which can bring safety risks.**Proposal**To ensure the integrity and compliance of UN packaging, it is recommended that the UN specification mark should be marked on the side when the top is a removable head.Amend 6.1.3.1 to read as follows (new text is bold and underlined):“6.1.3.1 Each packaging intended for use according to these Regulations shall bear marks which are durable, legible and placed in a location and of such a size relative to the packaging as to be readily visible. For packages with a gross mass of more than 30 kg, the marks or a duplicate thereof shall appear on the top or on a side of the packaging. **If the head on the top is removable, the marks or a duplicate thereof shall appear on at least a side of the packaging.**” |  |  |
| **ST/SG/AC.10/C.3/2021/53 (China)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-53e.docx)Proposal for exemption of manufactured articles containing small amounts of Gallium - Update of document [ST/SG/AC.10/C.3/2021/17](https://unece.org/sites/default/files/2021-04/ST-SG-AC.10-C.3-2021-17e.docx) (58th session) | At the fifty-eighth session of the Sub-Committee, the expert from China submitted official document ST/SG/AC.10/C.3/2021/17, proposing to amend special provision 366 to make it also adjust to “gallium contained in manufactured articles”, so that articles containing gallium and meeting relevant requirements were not subjected to the UN Model Regulations.During the discussion at that session, most experts who spoke showed no opposition to the principle of this proposal. However, on the proposed options for amendments, agreement was not reached. The current paper takes into consideration the comments and feedback received during the discussion.The current document contains two options. Option 1 is to add the entry GALLIUM CONTAINED IN MANUFACTURED ARTICLES and amend special provision 366 for this entry. Option 2 is to introduce a new special provision to the current entry of UN No. 2803, GALLIUM, to exempt the articles meeting the requirements in the new special provision, while articles containing gallium that do not meet the requirements should be transported under UN No. 3363 or UN No. 3547.Full details of both Options proposed can be found in the paper. |  |  |
| **4. Electric Storage Systems** |
| **(a) Testing of lithium batteries**  |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **(b) Hazard-based system for classification of lithium batteries** |
| **ST/SG/AC.10/C.3/2021/45 (France, RECHARGE)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-45e.docx)Work of the informal working group on hazard-based classification of lithium batteries and cells | This paper contains the latest report from the May 2021 meeting of the informal working group on hazard-based classification of lithium batteries and cells.More information on the work of the IWG can be found on the RECHARGE website: <https://rechargebatteries.org/sustainable-batteries/unsctdg/>.The meeting reviewed the last laboratory data on the testing for cells and batteries. The IWG concluded that the tests were impacted by variations in test methods and that led to challenges in reproducibility.It was discussed that laboratories should provide proposals on how to clarify the protocols addressing the conclusions from earlier tests:Refer to the annex to the paper for the full report of the IWG. |  |  |
| **(c) Transport provisions** |
| **ST/SG/AC.10/C.3/2021/54 (PRBA, RECHARGE)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-54e.docx)Proposed amendments to packing instruction LP90358th session [ST/SG/AC.10/C.3/2021/28](https://unece.org/sites/default/files/2021-04/ST-SG-AC.10-C.3-2021-28e_0.docx) | This paper updates the proposal at the 5th session on ST/SG/AC.10/C.3/2021/28, taking into consideration the comments received at that session.The lithium ion battery industry will see significant growth over the next ten years as new “giga-factories” are constructed in many parts of the world. These factories will each have the capability of producing billions of lithium ion cells annually for portable, industrial, and electric vehicle applications. To accommodate such growth, it is imperative that the limitation to one cell, battery, or item of equipment per large packaging currently included in LP903 be removed.**Proposal**PRBA and RECHARGE therefore propose to amend 4.1.4.3 on packing instruction LP903 as follows (new text is underlined, deleted text is stricken-through):

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| --- |
| **LP903 PACKING INSTRUCTION LP903** |
| This instruction applies to UN Nos. 3090, 3091, 3480 and 3481 |
| The following large packagings are authorized for cells, ~~a single~~ batter~~y~~ies and for ~~a single item of equipment~~ containing batteries, provided that the general provisions of **4.1.1** and **4.1.3** are met:Rigid large packagings conforming to the packing group II performance level, made of: |
|  | steel (50A);aluminium (50B);metal other than steel or aluminium (50N);rigid plastics (50H);natural wood (50C);plywood (50D);reconstituted wood (50F);rigid fibreboard (50G). |
| ~~The~~ Cells, batter~~y~~ies or ~~the~~ equipment shall be placed in inner packaging that completely enclose and separate them to ensure ~~packed so that the battery or the equipment is~~ protect~~ed~~ion against damage that may be caused by its movement or placement within the large packaging. |
| **Additional requirements:**Cells and batteries shall be protected against short circuit. The large packaging shall only be used to transport cell, battery, or equipment designs the packaging was originally designed and tested to accommodate. |

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| **(d) Damaged or defective lithium batteries** |
| At the time of writing no document has been submitted under this agenda sub-item |  |  |  |
| **(e) Sodium-ion batteries** |
| **ST/SG/AC.10/C.3/2021/55 (France)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-55e.docx)Sodium-ion batteries: Assignment of a dedicated UN number and related special provisions – Follow-up on document [ST/SG/AC.10/C.3/2020/45/Rev.1](https://www.unece.org/fileadmin/DAM/trans/doc/2020/dgac10c3/ST-SG-AC10-C3-2020-45e_Rev.1.docx)57th session [INF.9](https://www.unece.org/fileadmin/DAM/trans/doc/2020/dgac10c3/UN-SCETDG-57-INF09e.docx) and [INF.50](https://www.unece.org/fileadmin/DAM/trans/doc/2020/dgac10c3/UN-SCETDG-57-INF50e.docx) | The purpose of this document is to share with the Sub-Committee the progress of the topic relating to assignment of a dedicated UN number for sodium-ion batteries. The background information, including the basic proposals and associated technical justifications, are contained ST/SG/AC.10/C.3/2020/45/Rev.1, INF.9 (fifty-seventh session), and INF.50 (fifty-seventh session).This topic has been on the Sub-Committee’s agenda for more than two biennia. In view of the large amount of technical information provided in the past in support of the proposals debated on one side, and the confirmation by the signature of the corresponding multilateral agreements on the other, the provisions contained in these proposed amendments constitute a good solution for the transport of these batteries, for which industrial production at large scale has been announced. France believes that the proposals contained in informal document INF.50 are sufficient to be considered by the Sub-Committee for adoption at this biennium.The paper contains a number of proposals, including:* amending UN 3292 to read BATTERIES CONTAINING METALLIC SODIUM OR SODIUM ALLOY or CELLS CONTAINING METALLIC SODIUM OR SODIUM ALLOY,
* adding two new entries for XXXX SODIUM ION BATTERIES USING ORGANIC ELECTROLYTE and XXXX SODIUM ION BATTERIES USING ORGANIC ELECTROLYTE CONTAINED IN EQUIPMENT or SODIUM ION BATTERIES USING ORGANIC ELECTROLYTE PACKED WITH EQUIPMENT
* a new provision, 2.9.5, relating to sodium-ion batteries using organic electrolyte
* add in 3.3.1 a special provision XXX for the transport of shorted sodium-ion cells and batteries
* several associated consequential amendments.

Full details of all proposals can be found in the annex to the paper. |  |  |
| **(f) Miscellaneous** |
| **ST/SG/AC.10/C.3/2021/46 (Belgium)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-46e.docx)Provisions of 2.9.4 for lithium batteries transported under special provision 310 | Several discussions related to the transport by air in a working group of the dangerous goods expert group (Dangerous Goods European Liaison Group) of the European Association of dangerous goods Safety Advisors (EASA) and a working group of the dangerous goods panel of the International Civil Aviation Organisation (ICAO) demonstrated that it was unclear which provisions of 2.9.4 must always be met when lithium batteries are offered for transport.The paper contains a detailed discussion on the topic.**Proposal**If the Sub-Committee agrees with the interpretation in discussion section of the paper, it is proposed to insert the following text to special provision 310 (new text is underlined):"310 The testing requirements in the Manual of Tests and Criteria, part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells or batteries, or to pre-production prototypes of cells or batteries when these prototypes are transported for testing when packaged in accordance with packing instruction P910 of 4.1.4.1 or LP905 of 4.1.4.3, as applicable.Cells and batteries shall meet the provisions of 2.9.4 with the exception of 2.9.4 (a), 2.9.4 (e) (vii), 2.9.4 (f) (iii) if applicable, 2.9.4 f (iv) if applicable and 2.9.4 (g).The transport document shall include the following statement: “Transport in accordance with special provision 310”." |  |  |
| **5. Transport of gases** |
| **(a) Global recognition of UN and non-UN pressure receptacles** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **(b) Limited quantities for division 2.2** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **(c) Miscellaneous** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **6. Miscellaneous proposals for amendments to the Model Regulations on the Transport of Dangerous Goods**  |
| **(a) Marking and labelling** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **(b) Packagings including the use of recycled plastics material** |
| **ST/SG/AC.10/C.3/2021/43 (Spain)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-43e.docx)Refrigerated transports: reference to 5.5.3 in the special provisions affectedWP.15 [ECE/TRANS/WP.15/AC.1/2021/15](https://unece.org/sites/default/files/2021-01/ECE-TRANS-WP15-AC1-2021-15e.pdf) | Chapter 5.5 was introduced in 2012. It was dedicated to “Special provisions applicable to packages and cargo transport units containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951) or nitrogen)”.When 5.5.3 was introduced, many packing instructions existed that referred to cooling with dry ice, nitrogen or other substances, but they were not reviewed systematically when introducing 5.5.3. Amendments linking the packing instructions with 5.5.3. were only introduced to packing instructions P650 and P904 at that moment.Recent discussions at the Joint meeting (WP.15) identified that relevant packing instructions should be reviewed to introduce a uniform approach to referencing 5.5.3. Spain was asked to take this forward for consideration of the UN SC. Spain has conducted a detailed revision of all packing instructions where a coolant or conditioner is mentioned. As a result of this work, Spain is proposing amendment to the following packing instructions, P620, P800, P901 and P203.Full details of the proposal can be found in the paper. |  |  |
| **ST/SG/AC.10/C.3/2021/44 (Spain)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-44e_0.docx)Duplicated text in 4.1.1.12 | This paper contends that the leakproofness test contained in paragraph 4.1.1.12 is incorrectly located and a duplication of requirements specified in Part 6. Chapter 4.1 is dedicated to the use of packagings. Chapter 6.1 is dedicated to the requirements for the construction and testing of packagings and in paragraph 6.1.1.3 the same text is included as in paragraph 4.1.1.12 on the leakproofness test.Chapter 6.5 is dedicated to the requirements for the construction and testing of intermediate bulk containers. And paragraph 6.5.4.4.2 includes the same text that in the paragraph 4.1.1.12 on the leakproofness test.**Proposal**Spain proposes deleting paragraph 4.1.1.12. |  |  |
| **ST/SG/AC.10/C.3/2021/49 (Spain)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-49e.docx)Problems with the practical implementation of packing instruction P65058th session [INF.9](https://unece.org/sites/default/files/2021-06/UN-SCETDG-58-INF9e.docx) | Transport of UN 3373 “BIOLOGICAL SUBSTANCE, CATEGORY B” is only subject to the conditions imposed in packing instruction P650. Spanish experts have witnessed repeated cases of improper application of packing instruction P650, partially linked to the transport of samples due to testing of COVID-19.Attention was already drawn on this problem through informal document INF.9 presented at the 58th session. During the discussion no consensus on the proposed amendment to P650 could be reached, but several delegations pointed to different aspects of P650 that could be interesting to further analyse, and if needed, updated the proposal.Transport of UN 3373 shall be done only according to packing instruction P650, and not to any additional general requirements included into other parts of the UN Model Regulations (see paragraph (11) of P650 and special provision 319). This inter alia means that the packaging defined in P650 has no UN mark and therefore is not handled, from the point of view of quality-control and approval, as other packagings.According to the discussions on this subject during the previous session of the Sub-Committee, different aspects of P650 could be worth to be analysed in more detail, to see if different interpretations and/or problems of application have appeared in different countries and/or transport modes:The paper contains a detailed discussion on the following:* Drop test
* Pressure test
* Information provided for the consignor

**Proposal**Spain would welcome a lunch time working group meeting to be held during the Sub-Committee's session to further discuss different aspects of P650 with interested parties and discuss the need for further work to be done on this packing instruction. |  |  |
| **ST/SG/AC.10/C.3/2021/50 (China)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-50e.docx)Adding a note in 6.1.4.12.1 of the UN Model Regulations | The UN Model Regulationsare minimum requirements to be observed in the international transport of dangerous goods for all modes of transport. The objective is to ensure the safety, the property of people and the protection of environment. The UN Model Regulations are available in English, French, Russian, Arabic, Spanish and Chinese language versions. English and French versions are original ones, while all other linguistic versions are considered as translations of the original English and/or French versions. But translations cannot always interpret accurately the meaning of certain words due to differences between languages and cultural backgrounds. For example, in Chinese, the translations of “fibreboard” and “corrugated fibreboard” are two independent conceptions. One do not include the other, and vice versa.At its fifty-seventh session, the Sub-Committee of Experts on the Transport of Dangerous Goods clarified that the wording “fibreboard boxes” in 6.1.4.12 of the UN Model Regulations include “corrugated fibreboard boxes” (see paragraph 78 of report ST/SG/AC.10/C.3/114). But it is clarified only at the Sub-Committee level and China cannot find in any other published international regulation or international standard that “fibreboard” includes “corrugated fibreboard”. In line with the principle of respect for the original text, it is difficult to reflect the actual meaning in the UN Model Regulations after translation into other languages on the basis of the English and/or French versions of the UN Model Regulations and the value of the UN Model Regulations might be compromised.**Proposal**The expert from China invites Sub-Committee to further discuss the issues.China hopes that Sub-Committee could agree to add in 6.1.4.12.1 a new note to read as follows:"***NOTE:*** *The wording “fibreboard box” includes “corrugated fibreboard box”.*" |  |  |
| **ST/SG/AC.10/C.3/2021/51 (China)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-51e.docx)Supplementary note in 6.1.5.3.4 on the target in the drop test for packagings | This paper proposes to add a note after the text in 6.1.5.3.4 with the specific parameter values as an operational instruction for the laboratory conducting the drop test.In the daily drop tests, the target is a key part. Different factors such as strength, quality, size and flatness would lead to different effects on the test sample, which will eventually affect the test results. Therefore, the performance of the target needs to meet certain technical requirements. The performance requirement of the target is mentioned in 6.1.5.3.4, however there are no specific parameter values. A note on the impact surface with specific parameter values can be found in chapter 4.4 of standard ISO 2248:1985:*"NOTE - In normal circumstance, the impact surface provided shall be:** *Integral with a mass at least 50 times that of the heaviest package to be tested;*
* *Flat, such that no two points on its surface differ in level by more than 2 mm;*
* *Rigid, such that it will not be deformed by more than 0.1 mm when an area of 100 mm2 is loaded statically with 10 kg anywhere on the surface."*

Therefore, China proposes to add a note after the text in 6.1.5.3.4 with the specific parameter values as an operational instruction for the laboratory.**Proposal**Add at the end of 6.1.5.3.4 a note on specific technical parameters for the target (impact plate) as follows:*"****NOTE:*** *The target is preferred to be:** *Integral with a mass at least 50 times that of the package to be tested;*
* *No two points on its surface differ in level by more than 2 mm;*
* *It will not be deformed by more than 0.1 mm when an area of 100 mm2 is loaded statically with 10 kg anywhere on the surface."*
 |  |  |
| **6(c) Portable tanks**  |
| **ST/SG/AC.10/C.3/2021/35 (IDGCA)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-35e.docx)Amendments to Chapter 6.7 of the Model Regulations58th session [ST/SG/AC.10/C.3/2021/9](https://unece.org/sites/default/files/2021-04/ST-SG-AC.10-C.3-2021-9e_0.docx) | IDGCA proposed the following amendments to Chapter 6.7 of the UN Model Regulations at the fifty-eighth session of the Sub-Committee of Experts on the Transport of Dangerous Goods (document ST/SG/AC.10/C.3/2021/9). Based on comments received at that session, IDGCA have now prepared a more detailed proposal for consideration. This paper contains an updated proposal with detailed justification. Refer to the paper for the detailed justification for the proposas.**Proposals**IDGCA invites the Sub-Committee to consider the following proposals to the UN Model Regulations (new text is underlined, deleted text is strikethrough).**Option 1**Amend the sub-item (a) of 6.7.2.18.2 to read as follows:“The results of the applicable framework test specified in ~~ISO 1496-3:1995~~ the Annex II of the International Convention for Safe Containers (CSC) and/or other applicable standards”.**Option 2**Amend the sub-item (a) of 6.7.2.18.2 to read as follows:“The results of the applicable framework test specified in ~~ISO 1496-3:1995~~ the Annex II of the International Convention for Safe Containers (CSC) and/or other applicable standards”.Add the definition of a tank container to 6.7.2.1 to read as follows:“*Tank container* means a portable tank which includes two basic elements, the tank or tanks and the framework, and complies with the requirements of ISO 1496‑3:2019. No part of the tank container, its associated fittings and service equipment shall project beyond the overall external dimensions specified in ISO 668:2020.” |  |  |
| **6(d) Other miscellaneous proposals**  |
| **ST/SG/AC.10/C.3/2021/32 (EIGA)** [**Link**](https://unece.org/sites/default/files/2021-08/ST-SG-AC.10-C.3-2021-32e.docx)Correction to P200 for UN 2189, UN 1008 and UN 1859 | In packing instruction P200, two filling ratios are given for DICHLOROSILANE (UN 2189), BORON TRIFLUORIDE (UN 1008) and SILICON TETRAFLUORIDE (UN 1859). For the first filling ratio, special packing provision “a” is mentioned, but not for the second filling ratio. As a reminder, special packing provision “a” means that aluminium alloy pressure receptacles shall not be used. This provision should apply for both filling ratios.EIGA considers that these omissions should be corrected.**Proposal**EIGA proposes to add in 4.1.4.1 special packing provision “a” also for the second filling ratio for UN 1008, UN 1859 and UN 2189, as follows (new text in bold and underlined):

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1008 | BORON TRIFLUORIDE | 2.3  | 8 | 387 | X | X | X | X | X | 5 | 225300 | 0.7150.86 | a**a** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1859 | SILICON TETRAFLUORIDE | 2.3  | 8 | 922 | X | X | X | X | X | 5 | 200300 | 0.741.10 | a**a** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2189 | DICHLOROSILANE | 2.3  | 2.18 | 314 | X | X | X | X | X | 5 | 10200 | 0.901.08 | a**a** |

**Justification**This proposal will correct the mistakes and increase safety |  |  |
| **ST/SG/AC.10/C.3/2021/40 (ICDM)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-40e.docx)Rolling Hoops requirement for metal drums58th session [INF.11](https://unece.org/sites/default/files/2021-06/UN-SCETDG-58-INF11e.docx) | At the fifty-eighth session, Canada presented informal document UN/SCETDG/58/INF.11, requesting clarification on the requirement for rolling hoops on drums, given the ambiguity (shown in bold) of 6.1.4.1.4 “*The body of a drum of a capacity greater than 60 litres* ***shall, in general****, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops*”.Following the discussions of the Sub-Committee, this working document proposes modifications to clarify the requirements for rolling hoops on steel drums. The modifications would also apply to aluminium drums and drums of metal other than steel or aluminium.Further details are contained in the paper.**Proposal**Since the Sub-Committee experts have agreed that rolling hoops are intended primarily for handling, the experts from Canada and ICDM propose to amend 6.1.4.1.4 to promote consistent application of this construction clause across all national regulations. The proposed modification reads as follows (deleted text in strikethrough, new text underlined):“6.1.4.1.4 ~~The body of a drum of a capacity greater than 60 litres shall, in general, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops.~~ Drums may have rolling hoops, either expanded or separate. If there are separate rolling hoops they shall be fitted tightly on the body and so secured that they cannot shift. Rolling hoops shall not be spot welded.”The modification requested above is also applicable to paragraphs 6.1.4.2.3 for aluminium drums and 6.1.4.3.3 for drums of metal other than steel or aluminium. |  |  |
| **ST/SG/AC.10/C.3/2021/42 (Republic of Korea)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-42e_0.docx)Proposal for displaying the prevention of dangerous electrostatic discharge | According to the provision 4.1.2.1 of the UN Model Regulation, it is required that when intermediate bulk containers (IBCs) are used for the transport of liquids with a flash point of 60 ℃ (closed-cup) or lower, or of powders liable to dust explosion, measures shall be taken to prevent a dangerous electrostatic discharge (ESD).Meanwhile, there is no provision in the UN Model Regulations requiring the display of a symbol or mark on those IBCs to indicate that ESD prevention measures have been taken. As a result, it is difficult for users, shippers, or relevant personnel to check IBCs whether the preventive measures have been implemented or not during transport and handling.Therefore, new provisions are needed for a unified display of a symbol or mark on IBCs to indicate that ESD protection has been measured according to provision 4.1.2.1.In the case of flexible IBCs, the industry is applying the requirements on the prevention of ESD according to “IEC 61340-4-4, Standard test methods for specific applications-Electrostatic classification of flexible intermediate bulk containers”, and the symbol from “ISO 7000-2415, Protection against static electricity”.**Proposal**The paper contains two options for addressing the issue. Full details of each option are contained in the paper. |  |  |
| **7. Global harmonization of transport of dangerous goods regulations with the Model Regulations** |
| **ST/SG/AC.10/C.3/2021/38 (ICAO, WHO)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-38e.docx)Exclusion of pharmaceutical products from UN 3245 | This paper follows on from previous discussions relating to the application of UN 3245 to vaccines.At the fifty-seventh session of the TDG Sub-Committee, WHO expressed concern if vaccines containing GMMOs were regulated for transport as UN 3245 that could cause complications in transport. The Sub-Committee expressed the view that, by definition, GMMOs were not subject to the UN Model Regulations when authorized for use by the competent authorities of the countries of origin, transit and destination (see 2.9.2). The Sub-Committee agreed that vaccines authorized for use, including those in clinical trials, are not subject to the UN Model Regulations as currently written.Nevertheless, ICAO and WHO are of the opinion that a clearer text in the UN Model Regulations would help to avoid problems with the diverse stakeholders involved when shipping pharmaceutical products containing GMMOs or GMOs ready for use, and therefore this proposal of completing 2.9.2 is submitted.**Proposal**ICAO and WHO proposes adding in 2.9.2 Assignment to Class 9 a last sentence to read as follows (new text in bold underlined):*"Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs)*3245 GENETICALLY MODIFIED MICRO-ORGANISMS or 3245 GENETICALLY MODIFIED ORGANISMS GMMOs and GMOs which do not meet the definition of toxic substances (see 2.6.2) or infectious substances (see 2.6.3) shall be assigned to UN 3245. GMMOs or GMOs are not subject to these Regulations when authorized for use by the competent authorities of the countries of origin, transit and destination. **Pharmaceutical products (such as vaccines) that are ready for use, including those in clinical trials, and that contain GMMOs or GMOs are not subject to these Regulations**.*"* |  |  |
| **8. Cooperation with the International Atomic Energy Agency** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **9. Guiding principles for the Model Regulations** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **10. Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals** |
| **10(a) Testing of oxidizing substances** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **10(b) Simultaneous classification in physical hazards and precedence of hazards** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **10(c) Miscellaneous** |
| **ST/SG/AC.10/C.3/2021/37 (Germany)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-37e-ST-SG-AC.10-C.4-2021-07e.docx)Amendment to GHS Chapter 2.17 “Desensitized explosives”40th session [INF.6](https://unece.org/sites/default/files/2021-05/UN-SCEGHS-40-INF6.docx) | The issue discussed in this document has already been brought forward to the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee) at its fortieth session (informal document INF.6 (fortieth session)). Valuable comments were received by the experts. These were taken into account and the proposal was amended accordingly. As a physical hazard is concerned, the proposal is now also submitted to the Sub-Committee of Experts on the Transport of Dangerous Goods (TDG Sub-Committee) for its consideration and possibly for reference to the Working Group on Explosives.The background was outlined in informal document INF.6 (GHS Sub-Committee, fortieth session) but is summarized again in this document so that the experts of the TDG Sub-Committee have the same information. Refer to the paper for full details of the background to the proposal.Full details of the proposed amendments are contained in annexes I to III of the paper. |  |  |
| **11. Unified interpretations of the Model Regulations** |
| **ST/SG/AC.10/C.3/2021/41 (Republic of Korea)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-41e.docx)Request for interpretation of special provision 141 of UN 2969 | UN 2969 is classified as a dangerous goods according to the UN Model Regulation thus it shall be packaged and transported as dangerous goods. However, according to special provision 141 of UN 2969, there is an exception that “Products which have undergone sufficient heat treatment so that they present no hazard during transport are not subject to these Regulations.”In special provision 141, there are no criteria for risk removal or sufficient heat treatment procedure to judge “Products which have undergone sufficient heat treatment so that they present no hazard during transport”, so it is difficult to apply special provision 141. Moreover, when transporting non-dangerous goods under special provision 141, there is no requirement for the submission of related certificates, so it is difficult for shipping companies or the competent authority to understand the application of special provision 141.**Proposal**request for interpretation of “sufficient heat treatment so that they present no hazard during transport” for special provision 141 of UN 2969 in the UN Model Regulations.A castor bean has a very strong toxic substance called ricin and contains allergens. When heat treatment is performed to extract castor oil, ricin could be removed, but there are research reports that allergens remain in castor meal or castor pomace or castor flake even after heat treatment.It is questionable how to interpret the condition of “no hazard during transport” in special provision 141. In the absence of standards such as toxicity value (inhalation, skin and dermal) or ricin content, the wording “no hazard during transport” is paradoxical.Furthermore, the provision not to apply the UN Model Regulations if sufficient heat treatment is performed without sufficient heat treatment standards to eliminate the risk (for example, heating at 100 °C for 30 minutes or more) is not reasonable.The Republic of Korea pursued the rationale for an exemption according to special provision 141 of UN 2969 but could not find evidence.Therefore, the Republic of Korea requests that theSub*-*Committee of Experts on the Transport of Dangerous Goodsinterprets the reasons, standards or procedures for special provision 141 of UN 2969. And if the reasons, standards or procedures are not provided, it is proposed to delete special provision 141 that cannot be performed. |  |  |
| **ST/SG/AC.10/C.3/2021/47 (Belgium)** [**Link**](https://unece.org/sites/default/files/2021-09/ST-SG-AC.10-C.3-2021-47e.docx)Clarification of the wording “transported for testing” in special provision 310 | Special provision 310 is assigned to UN Nos. 3090, 3091, 3480 and 3481. The first paragraph of this special provision 310 states the following:*"310 The testing requirements in* *the Manual of Tests and Criteria, part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells or batteries, or to pre-production prototypes of cells or batteries when these prototypes are* ***transported for******testing*** *when packaged in accordance with packing instruction P910 of 4.1.4.1 or LP905 of 4.1.4.3, as applicable."*It has been identified that the wording "transported for testing" in the second last line of special provision 310 is interpreted differently by competent authorities.The Sub-Committee is requested to formulate an internationally harmonized interpretation of the wording "transported for testing" in the second last line of special provision 310. Additionally, it is proposed to add text to special provision 310.**Proposal**Depending on the interpretation of the Sub-Committee, the following new text is proposed to be added to special provision 310.**Option 1:**Add the following text to special provision 310 (new text is underlined):"310 The testing requirements in the Manual of Tests and Criteria, part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells or batteries, or to pre-production prototypes of cells or batteries when these prototypes are transported for testing when packaged in accordance with packing instruction P910 of 4.1.4.1 or LP905 of 4.1.4.3, as applicable.“Transported for testing” refers only to the testing that is defined in the Manual of Tests and Criteria, part III sub-section 38.3."**Option 2:**Add the following text to special provision 310 (new text is underlined):"310 The testing requirements in the Manual of Tests and Criteria, part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells or batteries, or to pre-production prototypes of cells or batteries when these prototypes are transported for testing when packaged in accordance with packing instruction P910 of 4.1.4.1 or LP905 of 4.1.4.3, as applicable.“Transported for testing” includes, but is not limited to the testing that is defined in the Manual of Tests and Criteria, part III sub-section 38.3, integration testing, product performance testing, etc." |  |  |
| **12 Implementation of the Model Regulations** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **13 Dangerous goods safety training and capacity building** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **14 Other business** |
| At the time of writing no document has been submitted under this agenda sub-item. |  |  |  |
| **15 Adoption of the report** |
| In accordance with the established practice, the Sub-Committee may wish to adopt the report on its fifty-eighth session and its annexes based on a draft prepared by the secretariat |  |  |  |