



**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****Fifty-seventh session**

Geneva, 29 June-8 July 2020

Item 3 of the provisional agenda

Listing, classification and packing**Request for a new UN number for cobalt dihydroxide powder****Transmitted by the Responsible Packaging Management Association of
Southern Africa (RPMASA) and International Confederation of Plastic
Packaging Manufacturers (ICPP)*****Introduction and background**

1. At the fifty-fifth session RPMASA introduced in informal document INF.24 a new challenge experienced for packaging and transport of cobalt dihydroxide, through the requirement for comprehensive GHS testing in the regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)¹, which had resulted in the drastic change of the transport classification from Class 9, UN 3077 ENVIRONMENTALLY HAZARDOUS SOLID, N.O.S. packing group (PG) III, to Class 6.1 TOXIC SOLID, BY INHALATION, Category 1, and PG I for which there was currently no UN number.
2. This presented a serious challenge as thousands of tonnes of cobalt dihydroxide in various forms have been transported safely over the past forty years as UN 3077 ENVIRONMENTALLY HAZARDOUS SOLID, N.O.S. (contains cobalt dihydroxide) Class 9, in flexible IBCs of PG III. The cobalt dihydroxide ranged from crude material from the mines in Africa to refined material in Europe and other parts of the developed world, by multi-modal means in flexible IBCs, with no recorded accidents, incidents or health issues.
3. A new UN number assigning flexible IBCs, with an appropriate packing instruction and special conditions was requested, as flexible IBCs had not previously been assigned to PG I.

The challenge/problem and subsequent actions taken

4. Concern was expressed that through increasing harmonisation with the GHS this could be the first of other fine powders to be impacted by GHS and REACH, thus a solution

* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2.

¹ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006. (Official Journal of the European Union, L396).

was needed to ensure continued transport and trade of such goods, especially those that exhibit no other physical hazards, and hence are not too dangerous to transport.

5. Testing by the Cobalt Institute in accordance with OECD Test Guideline 436 as per REACH resulted in the new classification. Particle size testing confirmed that the very fine refined material fell into the respirable range of < 10 µm, but that the coarser crude materials did not.

6. It was agreed that the coarse and pasty materials which do not emit dust, pose no hazard to inhalation, and thus fall outside of the respirable range, so could continue to be shipped in flexible IBCs PGIII as UN 3077 ENVIRONMENTALLY HAZARDOUS, SOLID, N.O.S.

Discussion

7. A lunch time work group discussion was convened on 4 July 2019 during the fifty-fifth session of the Sub-Committee to discuss possibilities for a short-term and long-term solution to this challenge. It was agreed to form an intersessional correspondence group, to progress this and to report back at the December 2019 session. Notes on the discussion were circulated to interested parties.

8. Discussions by email and teleconference resulted in RPMASA presenting informal document INF.19 at the fifty-sixth session in December 2019, with a lunch time discussion group on Thursday 5 December.

9. Outcomes of the lunchtime session were reported in informal document INF.54. These included that RPMASA progress discussion further with the intersessional correspondence group to present a formal proposal to the fifty-seventh session of the Sub-Committee for approval.

10. Comments received in February 2020 were included in a new draft which was circulated for discussion during a group teleconference on 4 March 2020. The notes of the meeting are circulated as informal document INF.5.

11. Discussion focussed on the use of special provision (SP) 354 which had only previously been used for liquids and vapours, as well as on the most appropriate packing instruction for PG I and wording for a special packing provision “Bx”.

12. It was agreed that:

- (a) Only one UN number UN 35XX was needed for COBALT DIHYDROXIDE POWDER, containing > 10 % respirable particles, as PG I.
- (b) The Cobalt Institute would engage with members to ascertain further data on mixtures containing cobalt dihydroxide as to correct assignment of class and packing group.
- (c) SP354 should be applicable to solids and dusts as well as liquids and vapours.
- (d) IBC07 is more appropriate than IBC08 as currently assigned to other PGI substances.
- (e) It is not necessary to include “inorganic” in the name as cobalt dihydroxide substance is inorganic, nor include “toxic by inhalation” if the > 10 % respirable particles is included in the proper shipping name, as these are repetitions.
- (f) The definition of “toxic by inhalation” should be reviewed with a more precise definition for solids/powders which could be included in Chapter 1.2.

13. An entry should be included in the Guiding Principles to provide for future issues related to greater harmonisation with the GHS.

Proposal

14. The Sub-Committee is invited to consider the proposal for a new UN number to be allocated for refined cobalt dihydroxide, classified as toxic by inhalation, Class 6.1 and PG I, with the specific packing Instructions and special provisions as shown in the table below for “COBALT DIHYDROXIDE POWDER, containing > 10 % respirable particles.”

Dangerous Goods List

Insert the new following new entry in the list of dangerous goods in Chapter 3.2:

UN No.	Name and description	Class or division	Subsidiary risk	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
35XX	COBALT DIHYDROXIDE POWDER, containing > 10% respirable particles	6.1		I	354	0	E0	P002 IBC07	B2, Bx	T6	TP33

Chapter 4.2

4.1.4.2 For IBC07, insert a new special packing provision “Bx” to read as follows:

“**Bx** UN 35XX may be transported in lined flexible IBCs (13H3 or 13H4).”

15. It is also proposed to review and clarify the definition of “respirable” in 2.6.2.1.3” which is currently not precise. Such definition could then be included in Chapter 1.2

16. It is proposed to introduce a new entry into the Guiding Principles to inform and provide guidance for future packaging assignment issues related to increasing harmonisation with the GHS. This could be included in section 4.2 of the guiding principles prior to the assignment table for IBCs.