



SCIENTIFIC SUB-COMMITTEE

NS0017E1  
(+ Annex)

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16<sup>th</sup> Session  
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O. Eng.

Brussels, 7 December 2000.

AMENDMENTS TO THE NOMENCLATURE AND THE EXPLANATORY NOTES  
TO CLARIFY THE CLASSIFICATION OF CO-ORDINATION COMPOUNDS

(Item II.2 on the Agenda)

Reference documents :

40.212 (SSC/11)	42.018 (HSC/21)
40.460, Annex A/10 (SSC/11 - Report)	42.100, Annex D/1 (HSC/21 - Report)
40.412 (HSC/18)	42.192 (SSC/14)
40.759 (SSC/12)	42.850, Annex A/2 (SSC/14 – Report)
40.870, Annex A/13 (SSC/12 - Report)	NC0016E1 (HSC/23)
41.100, Annex D/1, paragraph 22 (HSC/19 - Report)	NC0090E2 (HSC/23 – Report)
41.663 (SSC/13)	NC0009E1 (SSC/15)
41.687 (SSC/13)	NS0014E2, Annex A/8 (SSC/15 – Report)
41.690, Annex A/3 (SSC/13 - Report)	

I. BACKGROUND

1. At its 15<sup>th</sup> Session, the Scientific Sub-Committee continued to examine possible amendments to the Nomenclature and Explanatory Notes to clarify the classification of co-ordination compounds.
2. The Sub-Committee examined a new Note 8 to Chapter 29 to classify co-ordination compounds by ligand (or cleavage principle) proposed by the Swiss Administration (Annex to Doc. NS0009E1).
3. Certain delegates were of the view that these texts needed improvement. It was also suggested that the new Note should be short but to the point and additional explanations could be provided in the Explanatory Notes.
4. Certain other delegates expressed their concerns regarding the expressions “except where the context otherwise requires” and “where necessary” in the proposed texts for the reason that these expressions were vague and might create confusion in the application of this Note and other relevant parts of the legal texts. It was also indicated that any possible interactions with Note 5 to Chapter 29 should be studied.

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5. While there was general agreement on the utility of the proposed new legal Note, based on the cleavage principle, one delegate was not in favour of this principle reasoning that it would make classification more complicated. The Chairman pointed out that this issue had been discussed at the last session (14<sup>th</sup> Session) and it was agreed to study it further at this session (15<sup>th</sup> Session) on the basis of the cleavage principle because it would cause the least disturbance in the existing classification practice of a number of administrations, and the transfer of products would be limited.
6. Finally, in view of the expressed drafting concerns as mentioned in paragraphs 3 and 4 above, the Sub-Committee agreed to examine these texts further at its next session (16<sup>th</sup> Session).
7. Administrations were invited to submit written comments to the Secretariat concerning the proposed texts and consequent amendments to the Explanatory Notes.
8. On 16 June 2000, the Secretariat received following comments from the Swiss Administration.

## II. COMMENTS FROM THE SWISS ADMINISTRATION

9. "At the 14<sup>th</sup> and 15<sup>th</sup> Sessions of the Scientific Sub-Committee (SSC), there was a majority in favour of classifying co-ordination compounds based on the idea of cleavage of the metal bonds. It was suggested including the text in a short but precise new Note 5 (c). A proposal to rework the legal texts and the Explanatory Notes accordingly is set out in the Annex hereto.

### Comments on the proposed amendments

#### New Chapter Note 5 (c) (3)

10. The principle of classifying co-ordination compounds according to ligand, after cleavage of the metal bonds, is similar to the classification rules for salts of legal Note 5 (c). The reservations of Note 5 (c), namely the exclusion from Chapter 29 of compounds with precious metals, radioactive metals or isotopes, also applies to co-ordination compounds. That is why it makes sense to incorporate the proposed new legal Note governing the classification of co-ordination compounds in present Note 5 (c).

#### Exclusion of products classifiable in Sub-Chapter XI and in heading 29.41.

11. The proposed new Note 5 (c) (3) does not apply to co-ordination compounds which are vitamins, hormones or antibiotics. Thus, vitamin B<sub>12</sub> must remain in heading 29.36, and this clarification must be included in the Note.

### Amendment of the Explanatory Notes

12. The proposed new legal Note 5 (c) (3) must be included in the Explanatory Notes.

Possible amendment of the Explanatory Note (G) - Classification of esters, salts and certain halides (Chapter Note 5) (pages 345 – 346).

13. As the classification of co-ordination compounds is based on rules similar to those applicable to the classification of salts and as it is not necessary, for classification purposes, to distinguish between salts and co-ordination compounds, Switzerland feels that a very brief summary of co-ordination compounds together with examples is sufficient. The geometry and number of metal bonds (co-ordination number) are typical characteristics of co-ordination compounds.

Examples of products covered by heading 29.31.

14. To remove any uncertainty regarding the nature of the metal-carbon bond, it might be useful to supplement the list of examples in the Explanatory Notes to heading 29.31 with a reference to metal alkyls, metal fullerenes and metallocenes."

### III. SECRETARIAT COMMENTS

15. Based on the observations made by the Sub-Committee at its 15<sup>th</sup> Session, the Swiss Administration has submitted a new proposal with its comments as indicated above. This new proposal on possible amendments to the Nomenclature and Explanatory Notes is set out in the Annex to this document.
16. In respect of amendments to the Nomenclature, the Swiss Administration, in its new proposal, has opted to introduce a new Note 5(c)(3) instead of a new Note 8 proposed earlier. It has attempted to avoid any possible confusion with other relevant parts of the legal texts and has also made it short and to the point.
17. The new proposal was also based on the cleavage principle as agreed by the Sub-Committee at its 14<sup>th</sup> Session. As recalled at the 15<sup>th</sup> Session, this approach would cause the least disturbance in the existing classification practice of a number of administrations, and the transfer of products would be limited.
18. The proposed new Note 5(c)(3) would provide that, except for compounds having metal-carbon bonds (which would fall in heading 29.31), co-ordination compounds would be classified according to the organic "fragment" of the "cleaved" compound, i.e., by disregarding the co-ordinating metal atom(s).
19. The Secretariat could agree with the Swiss comments in paragraph 9 above and feels that this new proposal would answer the concerns expressed by the delegates at the 15<sup>th</sup> Session.
20. However, with regard to the application of this proposed new Note, the Secretariat wishes to recall the classification scenario submitted by the Swiss Administration at the 14<sup>th</sup> Session (Annexes C and D to Doc. 42.192). The Secretariat has noticed that this list was limited to mononuclear co-ordination compounds and there were no examples of co-ordination compounds of polynuclear complexes. The Secretariat therefore wonders whether there could be any difficulties in determining the structure of the cleaved ligand as pointed out by one delegate at the 14<sup>th</sup> Session.

21. With regard to the amendments to the Explanatory Notes, the Secretariat is of the view that some explanation on co-ordination compounds and further clarification on compounds having metal-carbon bonds which are classifiable in heading 29.31 would be helpful. The Secretariat also wonders whether any examples of co-ordination compounds of polynuclear complexes such as bridged metal complexes and homo- and hetero-nuclear clusters should also be included.
22. Since the Secretariat has not received any comments from other administrations, the Sub-Committee may wish to discuss this cleavage principle approach further in order to verify whether there would be difficulties in determining the structure of the cleaved ligand and then decide on consequent amendments to the Explanatory Notes.

#### IV. CONCLUSION

23. The Sub-Committee is requested to examine the new Swiss Proposal in the Annex hereto taking note of the Swiss comments in paragraphs 9 to 14 above and the Secretariat's comments in paragraph 15 to 22 above.

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