



HARMONIZED SYSTEM
COMMITTEE

NC0483E1

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28th Session
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O. Eng.

Brussels, 28 September 2001.

CLASSIFICATION OF CERTAIN MODIFIED STARCHES OR SIZING PREPARATIONS

(Item VIII.3 on Agenda)

I. BACKGROUND

1. In February 2001, the Secretariat received an inquiry from the Colombian Customs Administration, concerning the classification of the following six products referred to as "CATO-SIZE® 52 A", "CATO® 15A", "ETHYLEX® 2040 Gum", "Astro X-101 Starch", "Penford® Gum 270" and "STA-LOK® 400". All these products appeared to be modified starches used in the paper industry. However, the Secretariat was not certain about the classification of these products and felt it would be appropriate to refer this question to the Harmonized System Committee. The Colombian Customs Administration agreed to this course of action.

Description of the products

"CATO-SIZE® 52A"

2. The product literature indicates that this is used in the papermaking process to increase internal and surface strength, while improving finishing characteristics such as printability, smoothness and writing properties. It is applied for size press and calender operations where improved film forming and surface strength properties are desired. It also indicates that the product must be cooked to be effective. It is a type of cationic corn starch.
3. According to the chemical analysis forwarded, the product contains a defoamer (0.185 % by weight).

"CATO® 15A"

4. The product literature indicates that this is used in the papermaking process to increase internal and surface strength, retention and drainage, while improving finishing characteristics such as printability, smoothness and writing properties. It is applied as a dry strength and wet-end additive where maximum strength and excellent retention properties are required. It is a type of amphoteric corn starch as well as a functional amine and anionic modification on corn starch. The product must also be cooked to be effective.

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5. According to the chemical analysis forwarded, the product contains, by weight, phosphorus (0.3872 %) and silicon (0.000392 %).

“ETHYLEX® 2040 Gum”

6. The product literature indicates that this is a derivative of corn starch in which hydroxyethyl groups have been chemically substituted for a very small number of hydroxyl groups.

7. It also indicates that by varying the degree of substitution, and otherwise controlling the manufacturing process, two distinct series of Ethylex gums are produced - the 2000 and 3000 series. Substitution produces significant changes in the functional properties of the original starch, even though it appears unchanged physically.

“Astro® X-101 Starch”

8. The product is a cationic potato starch and is recommended whenever a cationic starch is needed at the wet end of the paper machine for improvement in dry strength properties, as well as for use with alkaline sizing agents.

“Penford® Gum 270”

9. This is a hydroxyethyl derivative of corn starch which has been viscosity modified for use at moderately high solids. It is a speciality starch with superior film-forming and water-holding. The product is recommended for use with a size press in clear size and pigmented formulas. It is indicated as an excellent choice for use with a Gate Roll Size Press.

“STA-LOK® 400”

10. The product is a cationic potato starch. The product literature indicates that this is one of a series of papermaking cationic potato starches. It also indicates that the product has features to increase strength and retention properties and is also used as an alkaline size emulsion stabilizer.

II. COMMENTS FROM COLOMBIA

11. The Colombian Administration is of the view that these products are classifiable in heading 35.05 as modified starches. However, the importer has argued that these are sizing preparations classifiable in heading 38.09.

III. SECRETARIAT COMMENTS

12. According to the Ullmann's Encyclopedia of Industrial Chemistry, Sixth Edition, starch is modified in various ways to produce acid-modified (thin-boiling), oxidized, cross-linked (e.g., by formation of distarch phosphates or adipates), partially esterified (either as carboxylate esters or phosphate esters), or partially etherified starch, or converted to cationic derivatives. These modifications, normally present at very low concentrations in starch

preparations, produce dramatic differences in the physical and chemical properties of starch and lead to a multitude of uses in both food and non-food applications.

13. According to technical information made available to the Secretariat in respect of the six products in question, as reflected in paragraphs 2 to 11 above, all these products are based on chemically modified starches. Heading 35.05 covers modified starches and therefore it would merit consideration.
14. On the other hand, all six products appear to be used in the paper industry as sizing agents or sizing additives and therefore heading 38.09 would also merit consideration.
15. In favour of heading 35.05, it could be argued that all these products are modified starches and therefore included in that heading. The Explanatory Note to heading 35.05 also indicates that esterified starches used principally in the textile or paper industries are covered in that heading (page 533, Item (A) (4)). Therefore it could be argued that all other modified starches used principally in the paper industry should be covered in that heading. Furthermore, the Explanatory Note to heading 38.09 (see paragraphs 1 and 2, page 568) indicates that heading 38.09 would cover those products and preparations which give them a specific use in the industries cited in the heading and like industries, provided that they are not specified and included elsewhere in the Nomenclature.
16. In favour of heading 38.09, it could be argued that heading 35.05 would cover those products suitable for general use only and therefore these products are more appropriate to be classified in heading 38.09. The Explanatory Note to heading 38.09, Item B (2), indicates that such products and preparations used in the paper, paperboard or like industries are included in that heading. Furthermore, according to the Explanatory Note to heading 35.05 (page 534), the heading **does not cover** prepared glazings and dressings (based on starches or dextrins) of a kind used in the paper, textile, leather or like industries (**heading 38.09**).
17. The Secretariat therefore feels that it is important to examine the scope of these two headings, 35.05 and 38.09, more carefully. The Secretariat is of the view that the intention was to cover those modified starch products suitable for general use in heading 35.05. However, the heading text and the Explanatory Note to that heading are not clear enough, particularly in respect of these modified starches suitable for use in the paper, textile and adhesive industries. Furthermore, the residual nature of heading 38.09, which reads in part “not elsewhere specified or included”, leads to confusion.
18. The Secretariat also wonders whether it would be possible to identify these modified starches based on their composition and presentation (see paragraph 2 of the Explanatory Note to heading 38.09, page 568). It appears that there exist a series of products where each product differs from others based on its specification. It appears that the required specification of the product is achieved by varying the degree of substitution in the starch molecules and otherwise controlling the manufacturing process. It may be that such specification of a particular product is achieved for the purpose of having the product particularly suitable for a specific use. The Secretariat is therefore not certain whether such a modified starch could be considered as a product particularly suitable for a specific use rather than for general use. This was evident in respect of the four products “ETHYLEX® 2040 Gum”, “Astro X-101 Starch”, “Penford ® Gum 270” and “STA-LOK ® 400”.

19. With regard to the two products “CATO-SIZE® 52 A”, “CATO® 15A”, the importer has argued that the products are formulated for a specific use due to the presence of other substances as reflected in the analytical report (see paragraphs 3 and 5). However, it was noted that the technical literature on these two products did not reflect the presence of such substances. These could be impurities left during the manufacture of these products and therefore the Secretariat is unable to comment on this aspect on the basis of the information provided. However, when compared with other products used in similar applications in the paper industry, the Secretariat is of the view that all six products in question are similar as far as the classification issue is concerned.
20. Therefore, in the context of the classification issue of these products, the Secretariat requests the Committee to examine the scope of heading 35.05 as against the scope of heading 38.09 and to determine the classification of these six products. Based on the outcome, the Committee may decide on the need for any amendments to the Nomenclature and/or the Explanatory Notes.

III. CONCLUSION

21. The Committee is requested to take note of the Secretariat's comments above and to examine the classification of the six products referred to as “CATO-SIZE® 52 A”, “CATO® 15A”, “ETHYLEX® 2040 Gum”, “Astro X-101 Starch”, “Penford ® Gum 270” and “STA-LOK ® 400”.
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