



HARMONIZED SYSTEM
COMMITTEE

-
27th Session
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NC0404E1

O. Eng.

Brussels, 2 April 2001.

CLASSIFICATION OF CERTAIN ACID-ADDED CLAY PRODUCTS

(Item IX.5 on Agenda)

I. BACKGROUND

1. On 25 January 1999, the Secretariat received a letter from the Colombian Administration concerning the classification of the "Pure-Flo B81", "Pure-Flo Pro-Active" and "Pure-Flo Color Master" clay products, obtained by controlled addition of sulfuric acid to natural palygorskite (attapulgite)-smectite clay through a process patented in the United States (Patent No. 5,783,511, date of patent : July 21, 1998).
2. The patent states that "...the present invention is directed to a method of selecting appropriate raw materials for treatment, as well as the treatment of those raw materials to produce clay compositions suitable for the adsorptive purification, such as bleaching, of oils... The method comprises the step of combining a palygorskite-smectite clay with sulfuric acid while maintaining a substantially constant ratio of surface acidity to added acidity for the clay mineral... The analysis of the relationship between added acidity and acidity found in solution has been found to be useful to minimize the likelihood of over-acidification and attendant deterioration of the clay mineral structure. Thus, the present invention relates to the process of optimizing the acidification treatment for producing bleaching clay products...".
3. The importing company in its letter to the Colombian Administration noted that "...with regard to the question concerning the difference between "acid-added" products from Oil-Dri and "acid-activated" products of other producers, we explain that it lies in (i) the unique properties or characteristics of the Oil-Dri source materials and (ii) in Process Patent 5,783,511, which enables acid to be "added" without changing the surface area properties/characteristics or the mineralogical properties/characteristics in the Oil-Dri line of products...".
4. Technical documentation provided by the Colombian Administration, including a copy of the aforementioned patent, results of "surface area analysis" and "mineralogical analysis" and methods of processing of "Pure-Flo B81", "Pure-Flo Pro-Active" and "Pure-Flo Color Master" in comparison to acid-activated clays will be made available to delegates during the meeting (English and Spanish only).

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5. The Colombian Administration asked the Secretariat whether the products at issue should be classified in heading 25.08 or 38.02 and what the difference between “acid added” and “acid activated” products was.
6. In its response to Colombia, taking into account the provisions of Note 1 to Chapter 25, the Secretariat noted that it would be desirable to establish whether “addition of acid” to the products of Chapter 25, also without modifying their chemical or crystalline structure, was covered by the expression “washing with chemical substances” and could be regarded as a process normal to these products or not and proposed to submit this question to the Harmonized System Committee, with a view to :
 - (i) clarifying the classification of the “Pure-Flo B81”, “Pure-Flo Pro-Active” and “Pure-Flo Color Master” clay products, and
 - (ii) updating the Explanatory Notes, or, if necessary
 - (iii) amending the HS Nomenclature in this regard.
7. By its letter of 15 February 2001, the Colombian Administration agreed with the Secretariat's proposal.

II. SECRETARIAT COMMENTS

Heading 25.08

8. Heading 25.08 covers clays (other than kaolin and other kaolinic clays of heading 25.07 and expanded clays of heading 68.06), whether or not calcined. Decolourising earths and fuller's earth fall in subheading 2508.20. This subheading includes attapulgite clay and other clays used for their absorptive properties, excluding bentonite of subheading 2508.10 (Subheading Explanatory Note to subheading 2508.20 on page 198).
9. According to Note 1 to Chapter 25, except where their context or Note 4 to this Chapter otherwise requires, the headings of this Chapter cover only products which are in the crude state or which have been washed (even with chemical substances eliminating the impurities without changing the structure of the product), crushed, ground, powdered, levigated, sifted, screened, concentrated by flotation, magnetic separation or other mechanical or physical process (except crystallisation), but not products which have been roasted, calcined, obtained by mixing or subjected to processing beyond that mentioned in each heading.

Heading 38.02

10. Activated natural mineral products are classified in heading 38.02.
11. According to the Explanatory Note to this heading, mineral substances are said to be activated when their superficial structure has been modified by appropriate treatment (with heat, chemicals, etc.) in order to make them suitable for certain purposes, such as decolourising, gas or moisture adsorption, catalysis, ion-exchange or filtering. Products generally characterised by a very large specific surface (of the order of hundreds of square metres per gram), and the presence of Van der Waal's bonds (physical adsorption) or free chemical bonds saturable by organic and inorganic molecules (chemical adsorption) are obtained by chemical or heat treatment of certain vegetable or mineral substances (clay,

bauxite, etc.) in the presence of natural impurities or added foreign matter. This treatment causes a change in the structure of the basic substance, accompanied by an increase in the specific surface, and in the case of crystalline substances, distortions in the lattice due to the insertion or substitution of atoms with different valencies. The valencies which thus remain free can cause the condensation of protons or electrons on the surface, rendering the product active as a chemical adsorbent, a catalyst or an ion-exchanger (page 556, first and second paragraphs of part (A), item (I)).

12. Exclusion paragraph (a) excludes naturally active mineral products (e.g., fuller's earth), which have not undergone any treatment modifying their superficial structures (Chapter 25) (page 557).

Considerations

13. The information provided by the Colombian Administration indicates that the three products at issue have been obtained by the controlled addition of sulfuric acid to natural palygorskite (attapulgite)-smectite clay.
14. In this connection, it should be pointed out that Note 1 to Chapter 25 allows washing the products of this Chapter with chemical substances (these should normally include acids) to eliminate impurities without changing the structure of the product. However, since "addition of acid" to natural clayey substances is not among the processes specifically allowed by Note 1 to Chapter 25 or by the text of heading 25.08, by way of strict interpretation of legal texts, the Secretariat is of the view that the products under consideration would be excluded from Chapter 25.
15. Further, the Secretariat would like to draw the attention of the Committee to the fact that, although "heat treatment" is not specifically provided in Chapter Note 1, the General Explanatory Note to Chapter 25 indicates that the products of this Chapter may also be heated to remove moisture or impurities or for other purposes, provided that the heat treatment does not modify their chemical or crystalline structure.
16. It may, therefore, be desirable to find out whether the term "washed" used in Note 1 to Chapter 25 would imply the addition of acid to certain products of this Chapter during certain types of treatment with acids.
17. In respect of classification in heading 38.02, on the other hand, it should be noted that mineral products are regarded as activated when their superficial structure has been modified, accompanied by an increase in the specific surface, as described in the Explanatory Note to this heading. However, the information from Colombia indicates that the addition of acid does not result in a change in the surface area or the mineralogical properties/characteristics of "Pure-Flo B81", "Pure-Flo Pro-Active" or "Pure-Flo Color Master". Therefore, the Secretariat has doubts about whether these three products meet the criteria set out in the Explanatory Note to heading 38.02 in respect of activated natural mineral products and, therefore, whether they are classifiable in this heading.
18. Accordingly, taking into account the fact that heat treatment of the products of Chapter 25 without modifying their chemical or crystalline structure is, although not listed in Note 1 to Chapter 25, already allowed in the General Explanatory Note to this Chapter, the Secretariat feels that it would be desirable to establish whether or not "addition of acid" to the products of Chapter 25, also without modifying their chemical or crystalline structure, (i) is

covered by the expression “washing with chemical substances” and/or (ii) could be regarded as a process normal to these products.

19. Considering the technical nature of the questions involved, the Committee may wish to have a preliminary discussion on this matter and refer it to the Scientific Sub-Committee for examination at its next session.
20. Meanwhile, the Secretariat could contact the Colombian Administration to obtain samples of the products under consideration and have these samples analysed by the Customs laboratory of a Contracting Party to obtain further information for examination by the Scientific Sub-Committee.

III. CONCLUSIONS

21. Taking into account the above comments, the Committee is invited to examine the classification of the “Pure-Flo B81”, “Pure-Flo Pro-Active” and “Pure-Flo Color Master” acid-added clay products.
 22. The Committee is also invited to express its views as to whether this matter should be referred to the next session of the Scientific Sub-Committee as proposed by the Secretariat.
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