



SCIENTIFIC SUB-COMMITTEE

NS0032E1

-
16th Session
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O. Eng.

Brussels, 15 January 2001.

CLASSIFICATION OF "MYKON ATC BLUE"

(Item II.9 on Agenda)

Reference documents :

NC0334E1, paragraph 10 (HSC/26)
NC0340E2, Annex IJ/3 (HSC/26 - Report)
NS0026E1 (SSC/16)

I. BACKGROUND

1. After the preparation of Doc. NS0026E1, the Secretariat received two letters, on 21 December 2000 and 3 January 2001, from the Argentine Customs Administration with further comments and technical information concerning the classification of "MYKON ATC Blue".
2. The Secretariat has reproduced these comments and additional information in the Annex to this document.

II. CONCLUSION

3. The Sub-Committee is requested to take account of these further comments and technical information provided by the Argentine Administration, as set out in the Annex to this document, when examining this Agenda item.

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File No. 2833

ANNEX

ARGENTINA

Letter of 21 December 2000 (Letter No. 303/2000)

The Argentine Customs Administration is writing to the Tariff and Trade Affairs Directorate to provide additional information on the classification of tetraacetythylenediamine (TAED), as this issue is to be submitted to the Scientific Sub-Committee for consideration at its next session.

Argentina therefore requests that the following be considered.

According to the information received by the Argentine Administration, TAED is in a crystal form, as a pure product (content in excess of 99%). However, in this form the product is not suitable for use in the composition of washing powders.

Moreover, although the crystals are very stable when stored, this stability can be improved by agglomeration or granulation.

Using a compacting process, TAED crystals are coated in a protective covering of an inert auxiliary material.

In the presence of alkalis, moisture, perborates and under the influence of a higher storage temperature, various chemical reactions take place which finally result in the deactivation of the bleaching system. That is why when incorporating TAED into washing powders only, a product can be used to protect the TAED against attack from the detergent components. The TAED product in granular form, produced for this purpose, meets this requirement.

The Kirk-Othmer Encyclopedia of Chemical Technology (Fourth Edition) describes TAED as a "per-acid precursor", i.e., a product forming per-acids by perhydrolysis. These products may be susceptible to hydrolysis or perhydrolysis in the solid state, especially when they are incorporated into detergents exposed to high moisture levels. In order to minimize deterioration of the precursor, the granular material can be incorporated to reduce instability during storage.

The above encyclopedia also describes the use of carboxymethylcellulose (CMC) as a stabiliser for certain antibiotics used in the production of foodstuffs. CMC is mixed with antibiotics to instantly obtain a granular form.

As for the addition of colorant to the product at issue, according to the information provided, coloured granules (blue or green) inform the consumer that the product contains active oxygen detergents, although this offers no advantage from the technical standpoint.

Hence the only purpose of the colorant is to denote the presence of a bleaching agent in the washing powder.

Letter of 3 January 2001 (Letter No. 02/2001)

In addition to the information provided in letter No. 303 of 21 December 2000, the Argentine Administration encloses a bibliography (Chemical Abstract Service) bringing out the following points:

1 – TAED is used as an additive in detergents (No. 29268q). In this respect, it should be pointed out that the above-mentioned bibliography does not state that TAED is unstable or that stabilisers have to be added to preserve or transport it.

2 - TAED is used as a peroxide activator in bleaching agents in the manufacture of washing powders (No. 86: 18753h).

3 - A bleaching activator (e.g., TAED) is mixed with a granulation agent (e.g., sodium carboxymethylcellulose salt) and the granules obtained, which ensure stability during storage, are used in washing powders (No. 125: 332385a). It should be stressed that, as pointed out in the seventh paragraph of letter No. 303/2000, the granular form minimizes instability during storage if TAED is used in the composition of washing powders.

Bibliography (Chemical Abstract Service)

107: 219491x Purification of tetraacetylenediamine for use in washing and bleaching compositions. Koester, Klaus; Carduck, Franz Jozef (Henkel K.-G.a.A.) **Ger. Offen. DE 3,609,735** (Cl. C07C103/90). 24 Sep 1987. Appl. 22 Mar 1986; 4 pp. Freshly prepd., cryst. $(Ac_2NCH_2)_2$ (**I**) is purified by washing with AcOH and water and drying. Cryst. **I**. Prepd. By refluxing 360 kg diacetylenediamine with 1275 kg Ac_2O for 3 h and cooling rapidly to 30°, was washed with AcOH (0.8 L/kg **I**. contg. 0.6% H_2O , contact time ~ 0.05 s), dried with an air stream (with recovery of AcOH), washed with water (1.8 L/kg **I**, contact time ~ 0.05 s) and dried with an air stream to give 364 kg colorless, odorless **I** contg. 5.4% H_2O . The wastewater contained 4% AcOH. The purified **I** was useful as a bleach activator.

29268q Tetraacetylenediamine. Palm, Christof; Matthias, Guenter (Badische Anilin- und Soda-Fabrik A.-G.) **Ger. Offen. 2,118,281** (Cl. C07c, C11d), 02 Nov 1972, Appl. P 21 18 281.0, 15 Apr 1971; 6 pp. $Ac_2NCH_2CH_2Nac_2$ (**I**), useful as additive for detergents, was prepd. continuously by heating 100 g $AcNHCH_2CH_2NHAc$ /hr and 900 g Ac_2O /hr at boiling temp. and removing 140 g mixt. of 63% HOAc and 37% Ac_2O /hr to give 85.7% **I**.

86: 18753h Powdered cleaning agents containing an activator for peroxide bleaching agents. Heslam, Robin S. (Unilever N.V.) **Ger. Offen. 2,616,350** (Cl. C11D11/02), 28 Oct 1976, Brit. Appl. 75/16,147, 18 Apr 1975; 22 pp. Washing powders contg. $Ac_2NCH_2CH_2Nac_2$ (**I**) [**10543-57-4**] as an activator for peroxide bleaching agents are prepad. by spray drying, eliminating the separate step of adding the **I** to the washing powder. Thus, a slurry contg. Na alkylbenzenesulfonate 15.3, soap 3.4, ethoxylated tallow alcs. 2.9, $Na_5P_3O_{10}$ 86.7,

Na₂SO₄ 25.9, I 13.5, additives 2.5, and water 150 kg was sprayed dried (300° inlet, 100° outlet).

125: 332385a Storage-stable bleach activator-containing granules and their preparation. Kruse, Hans; Bauer, Volker; Jung, Dieter (Henkel Kgaa, Germany) **Ger. Offen. DE 19,515,233** (Cl. C11D17/06), 31 Oct 1996, Appl. 19,515,233, 28 Apr. 1995; 6 pp. (Ger.). A powd. bleach activator [e.g., (Ac₂NCH₂)₂] is mixed with a powd. granulation aid (e.g., CM-cellulose Na salt) and sprayed with water or an aq. soln. of a granulation aid or detergent component in a mixing-granulation app. to give moist granules which are rounded by rubbing against surfaces (e.g., in a Marumerizer) and transferred into a dryer to prep. dried granules having bulk d. = 580 g/L and good storage stability. Rounding of the granules prevents agglomeration at the entrance to the dryer. The granules are useful in laundry detergents, etc.
