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Ref : DQ / MLa 05010a
From : Martine LADIETTE
To : Whom it may concern.
Date : 25 October 2005.
Subject : RoHS status - Amphenol Socapex Thyez plant.

Dear Sir, Madam,

Following the different questions asked to Amphenol Socapex about the conformity of our products to the 2002/95/EC RoHS Directive, please find hereafter our statement.

Note :

The RoHS Directive complements the WEEE legislation. It requires the restriction of certain heavy metals and that from 1st July 2006 new electrical and electronic equipment included under categories 1, 2, 3, 4, 5, 6, 7 and 10 of annex 1A of the WEEE Directive may not contain Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls (PBB) or Polybrominated Diphenyl Ethers (PBDE) in excess of their allowable Maximum Concentration Values (MCV), unless specifically exempted in the RoHS Directive Annex.

The RoHS Directive content has not been finalised yet. There are 22 additional requests for exemptions being applied for (including a request for the continued use of Hexavalent Chromium made by Amphenol corporation), or for clarification of the existing exemptions. Some of them will have an impact on our compliance status.

The MCV were defined mid August 2005 and the exemption requirement for hexavalent chromium should be stated by the end of 2005. Consequently our answers to customer surveys are done regarding the actual status.

Introduction :

Amphenol Socapex (including Industrial and Military Divisions) is committed to the reduction or elimination of hazardous substances. The identification, evaluation and implementation of process alternatives/substitutes has been and will continue to remain a company effort. Current products, if applicable and required (for military, aerospace,), will continue to be offered without deviation, each case will be examined regarding our customer's needs. Compliant products will be distinguished by new part numbers (the suffix of the current part number will change). Labelling or other means of identification will be changed or added if necessary.



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Statement :

Octa and Penta BDE (Pentabromodiphenyl Ether and Octabromodiphenyl Ether - Directive 2003/11/EC) :

Amphenol Socapex does not produce or ship any products containing known amount of Penta-BDE or Octa-BDE in concentrations greater than 0,1% by mass, and is therefore compliant with the above mentioned European directive.

Mercury :

Amphenol Socapex do not use mercury in the constitution of its products range.

Cadmium :

Amphenol Socapex uses Cadmium as a surface plating of metal components mainly for its 38999 and other military series of connectors, in the limits defined in paragraph 8 of the annex to European Directive 2002/95/EC. Cadmium plated is banned for applications stated in Directive 91/338/EEC, amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations. Responsibility rests for our customers to ensure that the Cadmium plated components purchased from Amphenol Socapex are not used in contravention to Directive 91/338/EEC.

Some researches are being conducted in Amphenol corporation and a lot of different platings have been tested for three years. Today no industrial alternative to Cadmium plating which would provide both an excellent resistance to corrosion, a good electrical continuity and good lubricating properties is available. We are continuing our tests and investigations. Amphenol can provide its customers with Cadmium free platings such as Nickel or Zinc Nickel or Zinc Cobalt. Depending on the plating process settings the properties of the plating will vary. Amphenol Socapex will support each customer regarding his technical needs.

Hexavalent Chromium :

Amphenol Socapex, in addition to other manufacturers performing metal finishes, currently utilizes Hexavalent Chromium in conjunction with other chemicals, as a passivate to produce "Olive Drab", "White" or "Iridescent" finishes on Cadmium layers. Amphenol Socapex and its chemical suppliers have made common research on alternative solutions to replace hexavalent chromium. Trivalent chromium has been tried. Current success is limited but research and development continues.

Note that Hexavalent Chromium passivate as used by Amphenol Socapex is currently under review for an exemption as part of the stakeholder consultation process under article 5(2) of Directive 2002/95/EC - See "Note" page 1 of this memo - Its properties (good electrical conductivity, good resistance to corrosion, self-healing, ability to provide a finished coloured surface, ...) are not available from suggested alternatives at this present time.



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Lead :

Amphenol Socapex uses lead as a plating finish in two types of products to be soldered on PCB : circular connectors and rectangular connectors. In both cases our plating currently contains a 60/40 Tin/Lead alloy. On rectangular connector we perform an electrolytic plating while on circular connectors the tip end of the contacts is plunged in a melting alloy.

For electrolytic deposits Amphenol Socapex is working with its plating baths suppliers to implement a pure tin bath in our plating shop. Some tests are still being performed. Pure tin plated connectors should be available by the end of March 2006. Note that some of our customers strongly require to go on using Tin Lead alloys because of the risk of whiskers in pure tin deposits (especially for Space and some Military applications).

For deposits from a melting alloy we are studying two different possibilities : the first one is an alloy 96.5% Tin + 3.5% Ag, the second one is an alloy SAC (Sn Ag Cu) made of 96.5% Sn + 3% Ag + 0.5% Cu. Tests are still in progress and parts will be available by the end of March 2006.

Amphenol Socapex is also developing and researching innovative lead free terminations such as cage clamps used in our EZ 5015 series.

Conclusion :

We trust that this statement clarifies the position of Amphenol Socapex Thyez policy and its approach to implementing the European Directive 2002/95/EC on the *restrictions and use of certain hazardous substances in electrical and electronic equipment dated January 2003*.

All the research and development are made within Amphenol corporation. That means that regular meetings are held all around the world, each division being concerned by the RoHS Directive. Amphenol Socapex is actively participating. All decisions will be corporate decisions.

Amphenol will apply the RoHS directive. Due to the technical difficulties and questions regarding this application, Amphenol can support all his customers. For that, we would be very interested in having your position, particularly concerning the Cadmium + Hexavalent Chromium + Lead (are you concerned or exempted, what are the main technical characteristics you require, ...). We warmly thank you in advance for your answer.

Please do not hesitate to contact me at the above address for any other query.

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