

Spectrum Control  
ET 30-0024  
**CONTROLLED AND PROHIBITED MATERIALS**

Rev: 04  
Date: 04/14/10

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PPIR/ECN# 54043-ENG

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## 1.0 PURPOSE

This document lists the controlled and prohibited materials that could be designed into Spectrum Control Products or be used in the manufacturing or cleaning of products. The identification of such products and distribution to the engineering community will reduce the potential hazards for our employees and anyone who comes in contact with a Spectrum Control Product.

## 2.0 DESCRIPTION

This document contains a listing of materials that have been designated as controlled or prohibited. Any controlled or prohibited material has been determined to be a hazard or potential hazard. It is the intention of Spectrum Control to continue to update the list as Government, SCI, or other sources such as RoHS identify additional materials.

Controlled materials are materials that have been determined as materials that should not be used when possible or minimize the use of such products.

Prohibited materials are materials that are not permitted for use in Spectrum Control Products.

Approved chemicals are material that have been approved for use per AT 35-5003 (Chemical Approval Process), and maintained on our Approved Chemical List which is Appendix A of AT 35-5003.

## Ø3.0 ASSOCIATED MATERIALS

- 3.1 AT 35-5003 Chemical Approval Process
- 3.2 RoHS 2002/95/EC
- 3.3 China RoHS

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ØIndicates a change in verbiage/procedure.

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### 4.0 GENERAL GUIDELINES THAT APPLY PER RoHS 2002/95/EC

- 4.1 The use of Lead, Mercury, Hexavalent Chromium, PBB, and PBDE is allowed up to 0.1% by weight in homogeneous materials. Cadmium is allowed in homogeneous materials at a percentage of 0.01% by weight.
- 4.2 A homogeneous material is a material that cannot be mechanically disjointed (separated) into different materials by unscrewing, cuttings, crushing, grinding, and abrasive processing.

### 5.0 SCI CONTROLLED AND PROHIBITED MATERIALS LIST

MATERIAL	CLASSIFICATION	Note
Asbestos	Prohibited	
Benzene	Prohibited (Only when customer specified)	
Cadmium and cadmium compounds	Controlled (EU RoHS) (Prohibited China RoHS)	6.1
Chlorofluorocarbons and halos	Prohibited	
Lead and lead compounds	Controlled (EU RoHS) (Prohibited China RoHS)	6.2
Mercury and mercury compounds	Prohibited	
Polychlorobiphenyls and derivatives (PCB's)	Prohibited	
Polychloroterphenyls and derivatives (PCT's)	Prohibited	
PVC and vinyl chloride monomers	Controlled (EU RoHS)	
Hexavalent Chromium	Prohibited	6.3
Polybrominated Biphenyls (PBB)	Prohibited	6.4
Polybrominated Diphenyls Ethers (PBDE)	Prohibited	6.4

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**6.0 SCI DESIGN NOTES: Unless otherwise specified**

6.1 Cadmium

- 6.1.1 Cadmium is banned if it is contact with food and hardware
- 6.1.2 Cadmium is allowed in aerospace applications and safety critical applications.

6.2 Lead

- 6.2.1 Lead in the ceramic formulations is allowed.
- 6.2.2 Lead in Solders requiring greater than 85% Pb is allowed, but many customers still require an alternative.
- 6.2.3 Lead is allowed in specific industries per the Annex, but many customers in those industries are requiring an alternative.
- 6.2.4 Lead is allowed in homogeneous materials up to the percentage shown in Section 4. Therefore packing label pigments, and PVC would be homogenous material if the percentage were low enough.
- 6.2.5 Lead is allowed as an alloying substance in steel up to .35%, up to 4% in red metals, and up to 0.4% in Aluminum.
- 6.2.6 Trace contents in plating materials are allowed if it meets the homogenous material guidelines for percentages.

6.3 Chromium

- 6.3.1 Hexavalent Chromium is the only Chromium that is banned
- 6.3.2 Metallic Chromium as in stainless steel is not included
- 6.3.3 All Chromium other than yellow have trivalent alternatives, but it does need specified as such.

6.4 PBB's and PBDE's

- 6.4.1 PBB's and PBDE's used as flame-retardants are banned. Alternate material in plastics and encapsulants need to be specified.