

AMETEK[®]
MATERIALS ANALYSIS DIVISION

June 11, 2018

Oeko-Institut e.V.
Yifaat Baron
P.O. Box 17 71
D - 79017 Freiburg
Germany

Dear Ms. Baron,

Amptek, Inc., manufactures x-ray detectors (considered to be an EEE component) which utilize very thin ($8\mu\text{m} - 100\mu\text{m}$) beryllium discs which are used as detector “windows”. These windows measure 9.5mm to 12mm in diameter, depending upon the detector size/type. Amptek resells x-ray tubes which also contain beryllium (Be).

Be has very unique properties in the field of x-ray spectroscopy and these windows are the standard in the tube and detector industry. Thin Be windows combine (1) excellent x-ray transmission properties (critical for many important analysis applications) and (2) excellent mechanical properties (vacuum tight, light tight, and rugged enough for field use). Other alternatives have been proposed and are being researched, but none meet the needs for all applications. Amptek offers a Be alternative and is available now, but not for all detector types.


Both detectors and tubes are used in analyzers which are used in a wide range of applications including, but not limited to, metals analysis, ROHS compliance Analysis, Lead Paint testing, etc... The use of Be in these windows is critical to these applications, until any alternative is a mature product. The amount of Be volumes of these discs utilized by Amptek for these applications is estimated to be less than 50 grams per annum.

If Be is restricted, it could impose a large burden on many companies, both large and small. If a substitute window is not backwards compatible, end-user companies could have to replace their analyzers instead of servicing them at a cost of \$15,000 - \$35,000 USD per analyzer. Amptek estimates that there are 25,000 – 50,000 x-ray spectrometers currently in use in the EU today.

Because of the high volume of Be windows used in x-ray spectroscopy, the high cost associated with replacing analyzers, the just emerging substitutions, and low mass (<2 kg by Amptek) required annually, Amptek strongly urges the commission that no restrictions be implemented for Beryllium.

Thank you in advance for your consideration in this matter.

Best regards,


David A. Clifford
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