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Dear Valued Customer,

Under the REACH directive, chemicals being imported into Europe at >1 ton per year will need to be registered through the European Chemical Agency (ECHA). Westak does not sell chemicals, as defined by REACH, to our customers. According to the REACH directive, Westak's printed circuit boards, as sold to our customers, are considered articles that do not require registration.

Based solely on the information we have received from our raw material suppliers, the printed circuit boards manufactured by Westak do not contain any of the SVHC's (Substance of Very High Concern) identified in the candidate list at [http://echa.europa.eu/chem\\_data/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/candidate_list_table_en.asp), with the following exception(s):

Lead (II) bis(methanesulfonate), CAS# 17570-76-2, EC# 401-750-5

A final finish of Hot Air Solder Level (HASL) or Tin-Lead Reflow will have the lead substance. Westak offers lead-free final finish alternatives for customers who have products that need to be RoHS2 and REACH compliant. Lead final finish on a circuit board is defined as an article, not a chemical substance.

Bisphenol A, CAS# 80-05-7

Isola laminate materials IS420, G200 and EMC laminate EM-827B may contain Bisphenol A above the threshold.

N,N-dimethylformamide, CAS# 68-12-2, 1-methyl-2-pyrrolidone (NMP), CAS# 872-50-4,

AGC Nelco N7000-1 & N7000-2VO material contains >0.3% and <1% of 1-methyl-2-pyrrolidone (NMP).

The solvents are bound in the resin matrix and under normal handling, exposure would be minimal.

These are not standard materials for Westak and alternatives are available, however customer designs that specify these Nelco materials without deviation would have them in the final product.

1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione(TGIC), CAS# 2451-62-9, EC# 219-514-3

1,3,5-tris[(2S+2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione ( $\beta$ -TGIC), CAS# 59653-74-6, EC#423-400-0

1,3,5-triazine-2,4,6-triamine, CAS# 108-78-1

2-methyl-1(4-methylthiophenyl)-2-morpholinopropan-1-one CAS# 71868-10-5

These substances are present in a component of Taiyo and Electra solder mask and Dynamask DM5016 dry film solder mask when in the uncured/wet form. During the cure reaction these substances react and lose their identity. Our suppliers have stated they expect less than 0.1% remains after cure. Cured solder mask on a PCB is defined as an article, not a chemical substance.

2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBP-A) CAS# 79-94-7

TBBP-A is an impurity of the halogenated cured resin system, which is an unintentional result from the original material(s). These may be a result of secondary or incomplete reactions occurring during the production process and are present in the final substance. Content within the copper clad laminate is less than 1000ppm.

Westak has not conducted any independent research, testing or evaluation to confirm the accuracy of this information. This information has been provided in good faith at your request.

Westak is committed to ensuring environmental compliance globally and will continue to stay informed of changes to the REACH directive and comply as necessary. More information about REACH can be found on the ECHA website, including a guidance document on articles: <http://ec.europa.eu/echa>

If you have any questions regarding Westak's compliance with REACH, you may contact Debby Hall at [drhall@westak.com](mailto:drhall@westak.com) or 408.734.8686 x6219.

Sincerely,

Deborah Hall  
Director of Business Services