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U.S. Department of Homeland Security
Washington, DC 20528-8100

RE: Chemical Facility Anti-Terrorism Standards; Interim Final Rule [Docket No. DHS-2006-0073, 72 FR 17688, April 9, 2007]

IPC - Association Connecting Electronics Industries - is the national trade association for the electronic interconnection industry, and represents more than 2,400 member companies involved in the manufacturing and assembly of printed circuit boards (PCBs). PCBs and electronic assemblies are used in a variety of electronic devices that include computers, cell phones, pacemakers, and sophisticated missile defense systems. On behalf of our members, IPC is pleased to submit the following comments on the Chemical Facility Anti-Terrorism Standards Interim Final Rule (IFR) published by the Department of Homeland Security (DHS) on April 9, 2007.

Although IPC members include electronic giants, such as Intel, Hewlett Packard, and IBM, sixty percent of IPC members meet the Small Business Administration's definition of "small business." IPC is concerned that the proposed list in "Appendix A: DHS Chemicals of Interest" of the IFR is inadequately defined. As a result, many businesses that utilize mixtures and solutions containing low concentrations of listed chemicals will be required to complete a Top Screen submittal. Such reporting of chemicals with low concentrations in mixtures and solutions will not only be a burden to those businesses, but will have the unintended consequence of creating an administrative burden on DHS for numerous facilities whose weak chemical mixtures and solutions pose no significant security risk or vulnerability.

The IFR listing for formaldehyde is "Formaldehyde (solution)." As such, there is no minimum concentration as DHS has proposed for both ammonia and hydrochloric acid. Further, the IFR does not state whether a chemical facility should calculate the total solution weight or only the anhydrous chemical weight of the listed chemical of interest. IPC members who manufacture PCBs utilize a purchased solution of copper sulfate (5-10%), formaldehyde (4-8%) and methanol (2-5%) to create a copper deposition onto PCB panels prior to electrolytic copper plating. The formaldehyde concentration in the "electroless copper" (EC) bath is less than 0.5%.

Depending upon how DHS requires chemical weights to be calculated, manufacturers could easily trigger the formaldehyde solution Screening Threshold Quantity (STQ) as follows:

2,585 lbs	5 drums of fresh solution (517 lbs/55 gallon drum)
8,100 lbs	2 – 450 gallon EC bath tanks (@ 9 lbs/gallon)
4,050 lbs	1 – 450 gallon spent bath awaiting shipment or on-site treatment
14,735 lbs	Total formaldehyde solution weight on-site

Is this the type of Top Screen submittal that DHS wants? IPC submits that solutions such as the above, which contain over 87% water are not the intent of this IFR standard. IPC recommends that DHS specify minimum concentration thresholds for calculating the STQ for chemicals of interest. Further DHS should clarify that only the anhydrous weight of such chemicals be used in determining applicability of the STQs.

A similar issue and concern exists for other PCB manufacturing chemicals. Specifically, those chemicals are hydrogen peroxide, nitric acid and sodium chlorate. IPC does not understand why DHS specified minimum concentrations for only two aqueous based chemicals (ammonia and hydrochloric acid) but did not specify minimum concentrations for other aqueous based chemicals. IPC recommends that DHS specify minimum concentrations for all aqueous chemicals listed in Appendix A, particularly the three used by PCB manufacturers (hydrogen peroxide, nitric acid and sodium chlorate).

In addition to specifying minimum concentrations for aqueous chemicals, DHS must also specify whether the solution weight or the anhydrous weight of said chemicals should be used in calculating applicability to the STQ threshold. As noted above in IPC's example for formaldehyde inventory in a medium-sized PCB manufacturer, solution weights can often be largely water. IPC submits that solutions in which the major component is water do not pose a significant security risk or vulnerability.

Lastly, DHS needs to address the issue of mixtures. This is somewhat related to the minimum concentration threshold issue described above, but is different in that other mixture components can not only dilute a chemical of interest, but can also render it ineffective for use as a terrorism raw material. For example, does the Department consider the electroless copper bath mixture above, in which copper sulfate is the major constituent, to be a security concern?

In summary, the April 9th IFR contains many inconsistencies and uncertainties for the regulated community to interpret. IPC recommends that DHS clarify "Appendix A: DHS Chemicals of Interest" so that there is no ambiguity in how to interpret each chemical listing, and in how the applicability of each chemical listing should be calculated against the STQ for that chemical.

IPC appreciates the opportunity to submit these comments. Should you have any questions, feel free to contact me by email at saharosman-sypher@ipc.org or by phone at 703-522-0225.

Sincerely,

Sahar Osman-Sypher
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