



Chemical Weapons Convention Bulletin

Department of Commerce
Bureau of Industry and Security

Chemical Weapons Convention: “Production of Intermediate Schedule 1 Chemicals”¹

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Schedule 1 “Captive Use” Declaration Guidance

The Bureau of Industry and Security (BIS) has prepared this publication to help ensure that industry properly declares Schedule 1 chemicals that are (or are anticipated to be) produced (manufactured) as “intermediates” in the production (manufacture) of another chemical. This activity is commonly referred to as “captive use” of a Schedule 1 chemical.

Although the Department of Commerce does not know of any cases where this type of activity is occurring currently, the relatively simple and chemically active nature of some Schedule 1 chemicals – for example, the sulfur and nitrogen mustards – makes them potential intermediates in the production of a wide variety of chemical products. Also, the literature indicates that synthesis pathways involving Schedule 1 chemicals as intermediates do exist and have been utilized.

How are these terms defined?

The term “captive use” is not defined in the CWC Regulations (15 CFR Parts 710-729). However, **the use of this term has become common in light** of a 2005 OPCW² Conference of States Parties Decision (C-

10/DEC.12, dated 10 November 2005), which states “that the production of a Schedule 1 chemical is understood, for declaration purposes, to include intermediates, by-products, or waste products that are produced and consumed within a defined chemical manufacturing sequence, where such intermediates, by-products, or waste products are chemically stable and therefore exist for a sufficient time to make isolation from the manufacturing stream possible, but where, under normal or design operating conditions, isolation does not occur”.

Part 710 of the CWC Regulations defines terms relevant to the implementation of this Decision on “captive use” of Schedule 1 chemicals, as follows:

- ***Intermediate:*** “Means a chemical formed through chemical reaction that is subsequently reacted to form another chemical.”
- ***Transient Intermediate:*** “Means any chemical which is produced in a chemical process, but because it is in a transition state in terms of thermodynamics and kinetics, exists only for a very short period of time, and cannot be isolated, even by modifying or dismantling the plant, or altering process operating conditions, or by stopping the process altogether.”

What are the declaration requirements?

Part 712 of the CWC Regulations requires you to submit a declaration if your facility produced or anticipates producing more than 100 grams aggregate of Schedule 1 chemicals in a calendar year.³ Additionally, Part 712 states that: “For the purpose of determining if

¹ The Schedules of Chemicals can be found at http://www.cwc.gov/cwc_treaty_chemicals_schedules.html

² Organization for the Prohibition of Chemical Weapons that implements the Chemical Weapons Convention

³ Initial Declaration (due 200 days prior to producing more than 100 grams aggregate of Schedule 1 chemicals), Annual Declaration on Past Activities, and Annual Declaration on Anticipated Activities



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a Schedule 1 chemical is subject to declaration, you must declare a Schedule 1 chemical that is an intermediate, but not a transient intermediate.”

Note: Part 712 of the CWC Regulations exempts mixtures containing 0.5 percent aggregate quantities of Schedule 1 chemicals as unavoidable byproducts or impurities, calculated by volume or weight, whichever yields the lesser percentage. This is commonly referred to as the “round to zero” rule.

What does this mean to industry?

If your facility produced or anticipates producing a Schedule 1 chemical as a “transient intermediate” in any of your processes, this activity is not subject to the Schedule 1 declaration requirements of the CWC Regulations. Please note, however, that the nature of such a process is likely to result in a declaration requirement for Schedule 2 or Schedule 3 chemicals, or unscheduled discrete organic chemicals (UDOCs).

If your facility produced or anticipates producing more than 100 grams aggregate annually of a Schedule 1 chemical as an intermediate, which is not a “transient intermediate,” you are subject to the declaration requirements in Part 712 of the CWC Regulations and, as such, are subject to inspection as well (see Part 716 of the CWC Regulations).

How can I learn more?

To learn more about CWC declarations or inspections, to request a site assistance visit, or to request a chemical determination, please visit our website at www.cwc.gov, contact BIS’s Treaty Compliance Division at 202-482-1001, or fax your request to 202-482-1731.