



Discrete Organic Chemicals (DOCs)

- Part IX of the Verification Annex of the Chemical Weapons Convention (CWC) covers the regime for "other chemical production facilities". This applies to plant sites that:
 - (a) produce more than 200 tonnes per year (aggregate quantity) of Discrete Organic Chemicals (DOCs) or:
 - (b) comprise one or more plants that produce more than 30 tonnes per year of a single DOC containing one or more of the elements Phosphorus, Sulfur or Fluorine (PSF-DOC).
- It is not the chemicals themselves that are important for Convention purposes but identification of facilities which might be used to produce Scheduled chemicals.

Definition

- The Convention definition for DOCs is: - "**any chemical belonging to the class of chemical compounds consisting of all compounds of carbon except for its oxides, sulfides and metal carbonates, identifiable by chemical name, by structural formula, if known, and by Chemical Abstracts Service registry number, if assigned**". This means that to be classified as a DOC, it must be a single chemical.
- The term **production** refers to production through a chemical reaction process.

Examples

Among DOC plant sites that will be subject to mandatory reporting under the Convention definition are those producing:

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| • Methanol and other alcohols | • Aldehydes including formaldehyde |
| • Ethers (such as MTBE) | • Chlorinated solvents |
| • Ketones | • Urea |
| • Esters | • Carboxylic acids |
| • Plasticizers | • Amines |
| • Ethylene oxide/glycol | • Organo-inorganic compounds |

Exemptions

- Plant sites that exclusively produce hydrocarbons e.g. ethylene or styrene facilities or a refinery. If the plant site producing hydrocarbons also produces non-hydrocarbon DOCs e.g. MTBE at a refinery, the total production is reportable.

