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## **Reactivity (D003) – How to Determine the Characteristic of Reactivity**

According to §261.23(a), a solid waste exhibits the characteristic of reactivity (and therefore is a RCRA D003 hazardous waste) if a representative sample of the waste:

- 1) Is normally unstable and readily undergoes violent change without detonating;
- 2) Reacts violently with water;
- 3) Forms potentially explosive mixtures with water;
- 4) When mixed with water, generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;
- 5) Is a cyanide- or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;
- 6) Is capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement;
- 7) Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
- 8) Is a forbidden explosive as defined in 49 CFR 173.54, or is a Division 1.1, 1.2 or 1.3 explosive as defined in 49 CFR 173.50 and 173.53.

EPA intended that this characteristic include wastes that are unstable, tend to react violently or explode, and/or give off toxic gases. The narrative standards in §261.23(a) are, to a large extent, a paraphrase of the reactivity definition employed by the national Fire Protection Association. The following materials are typically D003 reactives when they become wastes: aluminum alkyls, cyanides, lithium- and sodium-containing materials and sulfides.



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