

Naval Safety Command

Cadmium Bloom Safety Awareness Information



Cadmium Bloom is a toxic white crystalline powder (cadmium salt) that can form on cadmium-plated metal when exposed to oxygen, moisture and organic acids in enclosed marine environments. Because cadmium plating is widely used throughout the Fleet to protect metal components from corrosion, you may encounter Cadmium Bloom during routine maintenance or inspections. Recognizing the hazard and knowing how to respond are key to preventing exposure.

Why is Cadmium Bloom a Concern?

Cadmium and its compounds are OSHA-regulated carcinogens. Exposure most commonly occurs by inhaling cadmium dust or fumes or accidentally ingesting contamination from unwashed hands. While skin absorption is considered negligible, exposure can cause skin or eye irritation and, over time, increase the risk of kidney damage and certain cancers. Recognizing Cadmium Bloom early helps protect personnel and prevent unnecessary exposure.

How to Identify Cadmium Bloom

Cadmium Bloom is typically recognized as a white crystalline or chalky powder on cadmium-plated metal components. Unlike normal dirt or corrosion, this residue should always be treated as a potential health hazard until properly evaluated.

Cadmium-plated components may have finishes such as:

- Dull yellow
- Iridescent golden-yellow
- Olive drab or dark, greenish-brown (low reflectivity)
- Clear blue-white or silver-gray with a bluish tint

Cadmium Bloom is commonly found on:

- Electrical connectors
- Metal electrical connector caps
- Rotary switches
- Threaded fasteners
- Other cadmium-plated hardware aboard Navy vessels

If you suspect Cadmium Bloom is present:

- Stop working and avoid disturbing the material.
- Notify your supervisor immediately.
- Do not attempt cleanup until the area has been evaluated by Industrial Hygiene or medical personnel.
- Follow established hazard mitigation procedures, including required personal protective equipment (PPE), personal hygiene practices, and approved disposal methods.
- Complete required training if your duties involve cadmium-plated components.

For more information visit the following websites:

- www.navalcommand.navy.mil/Resources/Cadmium-Bloom-Guidance
- [ALSAFE 26-022](tel:1800268222)
- [CAC-Enabled Site](#)



Cadmium Bloom corrosion on connectors and fasteners

