

MIL-PRF-81309 (TYPE I, II, III CORROSION PREVENTIVE COMPOUND)

EXPOSURE IN NAVY AVIATION:

SHORT- AND LONG-TERM HEALTH EFFECTS

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MIL-PRF-81309—often referred to simply as “81309”—is a corrosion preventive compound widely used in Navy aviation for:

- Corrosion control and aircraft preservation
- Protecting metal surfaces from saltwater, humidity, and fuel vapor exposure
- Treating wheel wells, avionics bays, landing gear areas, and structural components
- Lubrication and moisture displacement

81309 formulations may contain:

- Petroleum distillates
- Aliphatic hydrocarbons
- Aromatic hydrocarbons (trace amounts)
- Corrosion inhibitors
- Solvent carriers

These ingredients can pose inhalation, skin-contact, and neurological hazards during repeated exposure.

SHORT-TERM (ACUTE) EFFECTS OF 81309 EXPOSURE

1. Respiratory Irritation:

Inhalation of fumes, especially during spray application, may cause:

- Burning throat
- Coughing
- Chest tightness
- Shortness of breath
- Headaches

These symptoms increase in enclosed aircraft spaces.

2. Skin and Eye Irritation:

81309 can irritate or dry the skin.

Symptoms include:

- Redness, burning, or itching
- Dermatitis
- Dry or cracked skin
- Watery or irritated eyes from vapor exposure

3. Central Nervous System (CNS) Effects:

Petroleum distillates and solvents may cause:

- Dizziness
- Fatigue
- Headaches
- Mild euphoria or slowed reactions

High levels may cause disorientation.

4. Gastrointestinal Effects:

Exposure to concentrated vapors can cause:

- Nausea
- Vomiting
- Chemical taste in the mouth

5. Fire and Vapor Hazards:

The compound is flammable; fumes may intensify symptoms when exposed to heat or confined spaces.

LONG-TERM (CHRONIC) EFFECTS OF 81309 EXPOSURE

1. Chronic Dermatitis:

Routine, unprotected contact may cause:

- Persistent skin irritation
- Dryness and cracking
- Chemical sensitivity that worsens over time

2. Neurological Effects:

Repeated exposure to hydrocarbon solvents may lead to:

- Memory problems
- Difficulty concentrating
- Chronic headaches
- Mood changes (irritability, anxiety)
- Fatigue or slowed cognitive processing

3. Respiratory Conditions:

Long-term exposure to aerosolized compounds can contribute to:

- Chronic cough
- Airway hypersensitivity
- Worsening asthma symptoms
- Reduced lung function

4. Liver and Kidney Stress:

Chronic solvent exposure may contribute to:

- Mild liver enzyme elevation
- Kidney irritation or filtration stress

Documented in high-exposure occupations.

5. Possible Carcinogenic Concerns:

While MIL-PRF-81309 itself is not classified as a carcinogen, petroleum-based corrosion preventatives may contain trace amounts of:

- Aromatic hydrocarbons

- Benzene (historically possible)

Long-term exposure increases the risk of:

- Blood cancers (leukemia, lymphoma)
- Lung cancer (with co-exposures such as fuels, paint fumes)

NAVY AVIATION ROLES AT HIGHEST RISK

- Aviation Structural Mechanics (AM)
- Aviation Machinist's Mates (AD)
- Aviation Electronics Technicians (AT)
- Corrosion control technicians
- Airframe/structures personnel
- Depot-level preservation crews
- Personnel working in wheel wells, landing gear bays, fuel cell areas

Confined working environments amplify exposure risk.

VA DISABILITY CLAIM WRITEUP EXAMPLE

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****Statement in Support of Claim: MIL-PRF-81309 Exposure – Navy Aviation****

I am submitting this statement in support of my claim for service-connected disability due to long-term exposure to the corrosion preventive compound MIL-PRF-81309 during my service in the United States Navy.

From [YEAR] to [YEAR], I served as an Aviation [RATE/MOS] assigned to the USS [SHIP] and multiple naval air stations. My duties included corrosion control procedures, aircraft preservation, and routine application of MIL-PRF-81309 in wheel wells, landing gear compartments, avionics bays, and structural areas. These tasks frequently involved aerosol spraying and wiping of 81309 in confined spaces with poor ventilation.

Personal protective equipment was not consistently provided or enforced. As a result, I routinely inhaled fumes and experienced immediate symptoms including headaches, dizziness, throat irritation, nausea, and fatigue. My skin was also frequently exposed, causing chronic dryness, redness, and irritation.

Since separating from the Navy, I have continued to experience chronic symptoms consistent with long-term exposure to petroleum-based corrosion preventatives, including recurring headaches, memory and concentration difficulties, chronic skin irritation, and respiratory discomfort. Medical evaluations have documented [RESPIRATORY CONDITION / CHRONIC DERMATITIS / NEUROCOGNITIVE IMPAIRMENT / OTHER], which are known long-term effects associated with repeated exposure to hydrocarbon solvents and corrosion inhibitors such as those found in MIL-PRF-81309.

Given the nature of my duties, the frequency of exposure, inadequate protective equipment, and persistence of symptoms following service, I believe my current medical conditions are directly related to my military occupational exposure. I respectfully request that the VA recognize these disabilities as service-connected.

Signed,

[Veteran Name]

[Date]