

GPC (GENERAL PURPOSE CLEANER – MIL-PRF-85570 & RELATED FORMULATIONS)

EXPOSURE IN NAVY AVIATION:

SHORT- AND LONG-TERM HEALTH EFFECTS

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In U.S. Navy aviation, “GPC” typically refers to ****General Purpose Cleaner****, including MIL-PRF-85570 Types I–IV and similar aircraft-approved cleaning and degreasing agents.

These cleaners are used for:

- Cleaning aircraft surfaces
- Corrosion control preparation
- Removing hydraulic fluids, oils, and sealants
- Wash rack operations
- Fuel cell & component cleaning
- Avionics bay and wheel well cleaning

GPC formulations can contain detergents, surfactants, glycol ethers, solvents, and alkaline components—each carrying inhalation and skin contact hazards.

SHORT-TERM (ACUTE) EFFECTS OF GPC EXPOSURE

1. ****Respiratory Irritation****

Inhalation of mist, spray, or fumes may cause:

- Burning, sore, or dry throat
- Coughing
- Chest tightness
- Shortness of breath
- Wheezing (especially in enclosed hangars or ships)

2. ****Skin & Eye Irritation****

GPC is mildly to moderately caustic depending on formulation.

Symptoms:

- Red, irritated, or burning skin
- Dryness and cracking
- Chemical dermatitis
- Eye redness, watering, burning

3. ****Headaches & Neurological Symptoms****

Some GPC products contain glycol ethers or solvent carriers that may cause:

- Headache
- Dizziness
- Fatigue
- Mild confusion during high exposure

4. ****Gastrointestinal Symptoms****

Accidental ingestion or heavy vapor exposure may cause:

- Nausea
- Vomiting
- Metallic or chemical taste

5. ****Reactivity with Other Chemicals****

When mixed with hydraulic fluid, fuel residues, or paint removers, GPC can produce more irritating vapors.

LONG■TERM (CHRONIC) EFFECTS OF GPC EXPOSURE

1. ****Chronic Dermatitis****

Repeated unprotected contact can lead to:

- Persistent skin irritation
- Cracking and bleeding skin
- Sensitization to solvents or detergents

2. **Respiratory Sensitization**

Long-term exposure (especially in corrosion control shops and wash racks) may cause:

- Chronic cough
- Airway hyperreactivity
- Exacerbation of asthma or COPD
- Reduced lung function

3. **Neurological Effects**

Some GPC formulations contain **glycol ethers**, known to cause:

- Memory problems
- Difficulty concentrating
- Chronic headaches
- Fatigue

4. **Liver and Kidney Stress**

Repeated high-level exposure to glycol ether–based cleaners may contribute to:

- Mild liver enzyme elevation
- Kidney filtration stress

5. **Reproductive Concerns**

Glycol ethers (in some older GPC formulations) are associated with:

- Possible reduced fertility
- Menstrual irregularities
- Developmental toxicity in animal studies

6. **Chemical Sensitivity**

Chronic exposure can make an individual more sensitive to:

- Solvents
- Cleaners
- Fumes, leading to rapid onset irritation

NAVY AVIATION ROLES AT HIGHEST RISK

- Aviation Structural Mechanics (AM)
- Aviation Machinist's Mates (AD)
- Aviation Electronics Technicians (AT)
- Corrosion control teams
- Wash rack & aircraft cleaning crews
- Fuel cell & maintenance technicians
- Depot-level artisans and painters

Working in enclosed aircraft bays, wheel wells, and fuselage spaces significantly increases exposure concentration.

VA DISABILITY CLAIM WRITEUP EXAMPLE

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****Statement in Support of Claim: GPC Exposure – Navy Aviation****

I am submitting this statement in support of my claim for service-connected disability due to prolonged exposure to General Purpose Cleaner (GPC), including MIL-PRF-85570 formulations, during my service in the United States Navy.

From [YEAR] to [YEAR], I served as an Aviation [RATE/MOS] and was routinely assigned to aircraft cleaning, corrosion control preparation, component degreasing, and maintenance that required daily use of GPC. These tasks frequently involved spraying, wiping, and scrubbing surfaces with GPC in confined aircraft bays, wheel wells, and hangars with limited ventilation.

Protective equipment was not always provided or enforced. As a result, I frequently inhaled GPC vapors and experienced immediate symptoms including headaches, throat irritation, dizziness, nausea, and eye burning. My hands and forearms were regularly exposed to the cleaner, causing skin redness, dryness, and chemical irritation during service.

Since leaving the Navy, I have continued to suffer from chronic symptoms consistent with long-term exposure to industrial cleaning chemicals, including persistent respiratory irritation, chronic dermatitis, recurring headaches, fatigue, and difficulty concentrating. Medical evaluations have documented [CHRONIC DERMATITIS / RESPIRATORY CONDITION / NEUROCOGNITIVE SYMPTOMS / OTHER], which are known long-term effects of exposure to solvent and glycol-ether based aircraft cleaners like GPC.

Given the nature of my duties, daily GPC exposure, lack of adequate ventilation and protective equipment, and continuation of symptoms after separation, I believe my current medical conditions are directly related to my military service. I respectfully request that the VA recognize these conditions as service■connected.

Signed,

[Veteran Name]

[Date]