



## Chemical Films

[MIL-C-5541E]

**Class 1A:** Chemical conversion coatings are intended to provide corrosion prevention when left unpainted as well as to improve adhesion of paint finish systems on aluminum and aluminum alloys. May be used on tanks, tubing, and component structures where paint finishes are not required for the exterior surfaces but are required for the interior surfaces.

**Class 3:** Chemical conversion coatings are intended for use as a corrosion preventative film for electrical and electronic applications where lower resistant contacts, relative to Class 1A coatings, and anodic coatings in accordance with Mil-A-8625, are required. The primary difference between a Class 1A and a Class 3 coating is thickness.

Chemical Film (chem film) coatings are gelateneous films which provide some sort of a barrier medium to retard corrosion on aluminum surfaces and enhance adhesion of subsequent coatings such as paints and primers. Materials qualified produce coatings that range in color from clear to iridescent yellow or brown; are electrically conductive; and impart some measure of corrosion protection. Inspection difficulties may arise with clear coatings because visual inspection does not always reveal the presence of a break in the coating.

**Applications include:** anodized components (where specific surfaces require electrical conductivity); aluminum stampings; electronic components.