



Dow (Magnesium Processes)

[MIL-M-3171C]

#1: A chrome pickle treatment for magnesium. Color varies from matte gray to yellow-red. Only fair corrosion resistance (less than 24 hours 20% salt spray resistance).

#7: A dichromate treatment for magnesium. Color varies from light brown to dark brown to gray depending on alloy. Only fair corrosion resistance (less than 24 hours 20% salt spray resistance).

#9: A galvanic anodize treatment for magnesium. Produces a dark brown to black coating. Designed to give a protective film on alloys which do not react to Dow No. 7 treatment. Only fair corrosion resistance (less than 24 hours 20% salt spray resistance).

Type I: Removes metal (Approximately .0006" for wrought material, less for castings). No dimensional change. Used mainly for protecting magnesium during shipment, storage, and machining. Can be used as a paint base. Note: Must remove Type I coating before applying Type III and Type IV treatments. Good paint base and protective qualities for all magnesium alloys except EK30A, EK41A, EZ33A, HK31A and M1A.

Type III: *Note: Precleaning and pickling may result in dimensional changes due to metal loss.*

Type IV: Makes no dimensional change. Can be used as a paint base, and is suitable to all magnesium alloys. Used where optical properties (black/non-reflective) are required on close tolerance parts (camera parts, laser components, telescopes, etc.) Note: Precleaning and pickling may result in dimensional changes due to basis material loss.