



Black Oxide Coating

[MIL-C-13924]

Black oxide is a conversion coating that causes virtually no dimensional change. It is a uniform continuous conversion of the existing metal to a black form of rust. Used primarily on components where tight tolerances are paramount; mostly as a decorative coating. Only very limited corrosion protection under mildly corrosive conditions. Should be kept oiled.

For moving parts which cannot tolerate the dimensional change of a more corrosion-resistant finish black oxide coatings should normally be given a supplementary treatment (i.e., oil displacement per Mil-C-16173 Grade 3 or protective treatments of Mil-C-16173). For decorative applications and can be used to decrease light reflection.

Class 1: Alkaline oxidizing. For wrought iron, cast and malleable irons, common carbon, and low alloy steels.

Class 2: Alkaline oxidizing. Use on certain corrosion resistant steel alloys tempered at less than 900°F

Class 3: Fused salt oxidizing. For corrosion resistant steel alloys which are tempered at 900°F (482°C) or higher.

Class 4: Alkaline oxidizing. For other corrosion resistant steel alloys.