

Corrosion of Cast Aluminum Alloys in Engine Coolants Under Heat-Rejecting Conditions

test method

Provides a laboratory screening procedure for evaluating the corrosion preventing capabilities of engine coolants under heat transfer conditions that may be encountered in aluminum cylinder head engines. Corrosion preventing effectiveness is determined by the change in weight of an aluminum alloy test specimen after an extended period at elevated temperature in the presence of a coolant sample.

dual corrosion test apparatus

- Conforms to ASTM D4340 specifications
- Operating range to 210°C

Consists of two heat-transfer corrosion cells with temperature and pressure controls for evaluating engine coolant samples in accordance with ASTM D4340. Maintains aluminum alloy specimens at constant temperature in the presence of 500 mL samples. Each corrosion cell includes a borosilicate glass test cell, heat transfer bar, aluminum test specimen with thermocouple port, Type J thermocouple, 950W band heater, pressure gauge, pressure relief valve, stainless steel end plates with support rods, fill plug and o-rings, and acrylic safety shields. Digital temperature controllers maintain specimens at temperatures of up to $210 \pm 1^\circ\text{C}$ throughout the test period. Test cells are mounted on a finished steel base. Controls are housed in a separate finished steel cabinet.

ordering information

catalog no. description

- | | |
|---------------|---|
| K80100 | Dual Corrosion Test Apparatus, 115V 60Hz |
| K80190 | Dual Corrosion Test Apparatus, 220-240V 50/60Hz |

accessories

- | | |
|---------------|-------------------------------|
| K80101 | Test Cell, Borosilicate Glass |
| K80102 | Aluminum Test Specimen |



K80100 Dual Corrosion Test Apparatus

specifications

Conforms to the specifications of:
ASTM D4340

Test Capacity: 2 coolant samples
Maximum Temperature: $210 \pm 1^\circ\text{C}$

Electrical Requirements

115V 60Hz 17A Single Phase
220-240V 50/60Hz 8.5A Single Phase

Dimensions l x w x h, in.(cm)

Test Unit: 43x27x44 (109x69x112)
Control Cabinet: 10x14x12 (25x36x30)
Net Weight: 190 lbs (86.2kg)

Shipping Information

Shipping Weight: 327 lbs (148.3 kg)
Dimensions: 46.7 Cu. ft.