Copper Corrosion from Petroleum Products

Test Method

The Copper Strip Tarnish Test assesses the relative degree of corrosivity of petroleum products, including aviation fuels, automotive gasoline, natural gasoline, solvents, kerosene, diesel fuel, distillate fuel oil, lubricating oil and other products. A polished copper strip is immersed in 30mL of sample at elevated temperature. After the test period, the strip is examined for evidence of corrosion and a classification number from 1-4 is assigned based on a comparison with the ASTM Copper Strip Corrosion Standards. For aviation fuels and natural gasoline the sample tube is placed inside a stainless steel bomb during testing.

Test Bomb Baths

Thermostatically controlled water bath immerses Copper Strip Corrosion Test Bombs at the required depth per ASTM specifications. Use for testing aviation gasoline, aviation turbine fuel and natural gasoline. Fully insulated, double-wall stainless steel construction. Soxhlet reflux condenser and constant water level device maintain proper working depth. Choice of four-bomb and eight-bomb models. Optional removable test tube rack converts four-bomb model for testing of products not requiring corrosion bomb.

Specifications: Conforms to the specifications of: ASTM D130; IP 154 FSPT DT-28-65; ISO 2160; DIN 51759; FTM 791-5325; NF M 07-015
Testing Capacity:
K25310/K25319: four (4) copper strip corrosion test bombs
K25320/K25329*: eight (8) copper strip corrosion test bombs
**or sixteen (16) test tubes with optional test rack (Catalog No. K25309) installed*
Maximum Temperature: 221°F (105°C)
Temperature Control Stability: ±1°F (± 0.5°C)
Heater Range: 0-750W
Bath Medium: 5 gal (18.9L) water
Electrical Requirements: CE
115V 60Hz, Single Phase, 7.5A
220-240V 50/60Hz, Single Phase, 4A
Temperature Control: Analog

Included Accessories

Rubber Stoppers for bomb openings (4)

Dimensions: lxwxh,in.(cm)
4-bomb model: 12x10x21 (30x25x53)
8-bomb model: 16x11½x21 (41x29x54)
Net Weight:
4-bomb model: 18½ lbs (8.4kg)
8-bomb model: 24 lbs (10.9kg)

Shipping Information

Shipping Weight:
4-bomb model: 41 lbs (18.6kg)
8-bomb model: 45 lbs (20.4kg)
Dimensions:
4-bomb model: 5.3 Cu. ft.
8-bomb model: 5.5 Cu. ft.

Ordering Information

Catalog No.	
K25310	Bath for Copper Strip Corrosion Test Bombs, 4-Unit, 115V 60Hz
K25319	Bath for Copper Strip Corrosion Test Bombs, 4-Unit, 220-240V 50/60Hz
K25320	Bath for Copper Strip Corrosion Test Bombs, 8-Unit, 115V 60Hz
K25329	Bath for Copper Strip Corrosion Test Bombs, 8-unit, 220-240V 50/60Hz
K25309	Optional Test Tube Rack for 8-Bomb Bath

Please refer to page 99 for photograph of K25310 Series Corrosion Baths.

Software compatible, inquire with Koehler Customer Service.

K25330 Copper Strip Test Tube Bath

Test Tube Bath

Constant temperature bath immerses 17 test tubes for copper strip tarnish tests of products not requiring a test bomb, including: diesel fuel, fuel oil, automotive gasoline, Stoddard solvent, kerosene and lubricating oil. Microprocessor temperature controller has °C/°F switchable digital setpoint and display. Operator and equipment are protected by an overtemperature control circuit which automatically interrupts power to the unit should bath temperature exceed a programmed cut-off point. *Communications software (RS232, etc.), ramp-to-set and other enhanced features are available as extra cost options. Contact your Koehler representative for information.* Welded stainless steel inner wall and powder coated steel outer wall construction with built-in support rack. Fully insulated.

Specifications

Conforms to the specifications of: ASTM D130, D6074, D6158; FSPT DT-28-65; IP 154; ISO 2160; DIN 51759; FTM 791-5325; NF M 07-015
Capacity: 17 test tubes
Maximum Temperature: 190°C (374°F)
Temperature Control Stability: ±1°C (±2°F)
Heater Range: 0-750W
Bath Medium: 5 gal (18.9L) water or high temperature heater transfer fluid
Electrical Requirements: CE
115V 60Hz, Single Phase, 7.5A
220-240V 50/60Hz, Single Phase, 4A
Temperature Control: Digital

Dimensions: lxwxh,in.(cm)
15½x12½x14 (39x32x36)
Net Weight: 27 lbs (12.2kg)

Shipping Information

Shipping Weight: 45 lbs (20.4kg)
Dimensions: 12.8 Cu. ft.

Ordering Information

Catalog No.	
K25330	Copper Strip Test Tube Bath, 115V 60Hz
K25339	Copper Strip Test Tube Bath, 220-240V 50/60Hz
K25330-8B	Optional test Bomb Rack
K25330-4B-8T	Optional Rack, 4-Bomb, 8- Tube
K25330-6B-6T	Optional Rack, 6-Bomb, 6-Tube

Copper Strip Corrosion Test Bomb

- For aviation fuels and natural gasoline

Precision machined stainless steel bomb inserts in copper corrosion bath for testing aviation fuels and natural gasoline. Withstands test pressure of 100psi (689kPa) per specifications. Threaded cap with O-ring gasket and knurled circumference tightens by hand to a positive seal. A ⅛" groove in the bomb threads permits safe, gradual release of pressure when opening the bomb.

Specifications

Conforms to the specifications of:
ASTM D130, D6074, D6158; IP 154; ISO 2160; DIN 51759; FTM 791-5325; NF M 07-015
Net Weight: 1 lb (.45kg)

Shipping Information:

Shipping Weight: 2 lbs (.91kg)

Ordering Information

Catalog No.	
K25200	Copper Strip Corrosion Test Bomb

Accessories

K25080	Copper Test Strip 12.5x1.5-3.0mm x 75mm to ASTM specifications
332-004-004	Test Tube 25 x 150mm
332-004-002	Viewing Test Tube Protects copper strip during inspection or storage
K25100	ASTM Copper Strip Corrosion Standards Colored reproductions of tarnished strips encased in a plastic plaque
380-220-001	Silicone Carbide Paper, FEPA Grade, 220 grit For polishing of copper strips prior to testing - Pack of 50 sheets
380-150-003	Silicone Carbide Grain, FEPA grade, 150 grit For final polishing of copper strips prior to testing - 1 lb package
K25000	Polishing Vise Holds copper strip firmly in place without marring the edges. Stainless steel, mounted on a composition base
K25090	Multi-Strip Polishing Vise Similar to K25000 but capable of holding four strips at a time
250-000-12F	ASTM 12F Thermometer. Range: –5 to +215°F
250-000-12C	ASTM 12C Thermometer. Range: –20 to +102°C

Silver Corrosion Test

Please refer to page 99 for information.

For NIST traceable certified thermometers, please refer to the ASTM Thermometer section on pages 184 through 191.

Test Apparatus for Aviation Fuels and Natural Gasoline

Catalog No.		Order Qty
K25310	Bath for Copper Strip Corrosion Test Bombs, 115V	1
K25319	Bath for Copper Strip Corrosion Test Bombs, 220-240V	
K25200	Copper Strip Corrosion Test Bomb	4
K25080	Copper Strips	4
332-004-004	Test Tube	4
332-004-002	Viewing Test Tube	4
K25100	ASTM Copper Strip Corrosion Standard	1
380-220-001	Silicone Carbide Paper, FEPA Grade, 220 grit	1
380-150-003	Silicone Carbide Grain, FEPA grade, 150 grit	1
K25000	Polishing Vise	1
250-000-12F	ASTM 12F Thermometer	1
250-000-12C	ASTM 12C Thermometer	

Test Apparatus for Diesel Fuel, Fuel Oil, Automotive Gasoline, Stoddard Solvent, Kerosene, Lubricating Oil and Biodiesel

Catalog No.		Order Qty
K25330	Copper Strip Test Tube Bath, 115V (or K25339 Bath, 220-240V)	1
K25080	Copper Strips	17
332-004-004	Test Tube	17
332-004-002	Viewing Test Tube	17
K25100	ASTM Copper Strip Corrosion Standard	1
380-220-001	Silicone Carbide Paper, FEPA Grade, 220 grit	1
380-150-003	Silicone Carbide Grain, FEPA grade, 150 grit	1
K25090	Multi-Strip Polishing Vise	1
250-000-12F	ASTM 12F Thermometer	1
250-000-12C	ASTM 12C Thermometer	

K25200 Copper Strip Corrosion Bomb with K25100 and K25080