

Corrosiveness to Copper of Liquefied Petroleum Gases

ASTM D1838 - EN/ISO 6251 - IP 411 - BS6924 - NF M41 007



Position for four LPG test cylinders
Overflow outlet & bath drain
Cooling fan to use at 37.8°C
Cooling coil for sub-ambient
Easy to operate
Stainless steel bath

General

The TB30 bath is designed to cover the detection of the corrosiveness to copper of liquefied petroleum gases conform to ASTM D1838, IP 411, and ISO 6251.

A test involves the immersion of a polished copper strip in approximately 100 mL of sample. The sample is exposed at a temperature of 37.8°C (100°F) for one hour in a cylinder of suitable working pressure. At the end of this period, the copper strip is removed and rated as one of the four classifications of the ASTM copper corrosion standard.

The TB30 is specifically designed to hold a temperature stable at 37.8°C without the use of an external cooling circulator. At exceptional high ambient temperatures the built-in cooling coil can be used. The bath is deep enough to accommodate four corrosion test cylinders in an upright position. Two lids to hold the test cylinders in place are standard included with the bath.

The corrosion test cylinder is manufactured by Tamson. It is supplied with a works certificate that the cylinder is pressure tested to withstand a minimum pressure of 6900 kPa and leak free when tested at 3450 kPa.

Item	Unit	Description
P/N TB30 230V/50-60Hz		00T0065
P/N TB30 115V/60Hz		00T0066
Power	[kW]	1.5
Range	°C °F	Ambient..80 Ambient..176
Reading	[°C/°F]	°F on request
Setting	[°]	0.01
Stability ±	[°C]	0.02
Heating	[kW]	1.4
Bath volume	[L]	30
Bath opening	[mm]	163 x 192
Bath depth	[mm]	460
Length	[mm]	285
Width	[mm]	450 (490 incl. drain)
Height	[mm]	680
Materials	Used inside bath: stainless steel 304, brass bearings	
CE	Conforms to CE regulations	

Accuracy

The insulation of the bath and electronic design result in a stable working temperature of $\pm 0.02^{\circ}\text{C}$. The set point can be set in steps of 0.01° in the range of 0°C up to 80°C (33.8 to 176°F). The display readout is in two decimals (0.00°C). Temperature range of the TB30 is from ambient up to $+80^{\circ}\text{C}$ (176°F).

Temperature readout

Standard available in $^{\circ}\text{C}$, on request in $^{\circ}\text{F}$.

Safety

The bath conforms to CE regulation. It is further equipped with a mechanical and resettable safety thermostat. The TB30 is equipped with a float that warns the user when the level of the bath fluid in the TB30 has become too low.

RS232

The bath comes standard with RS232 communication and when using the free software tool Tamcom, it provides temperature logging or a predefined temperature set point curve.

Corrosiveness to Copper of Liquefied Petroleum Gases

Accessories

Table 1: TB30		
P/N	Picture	Description
00T0065		TB30 bath (230V/50-60Hz)
00T0066		TB30 bath (115V/60Hz)

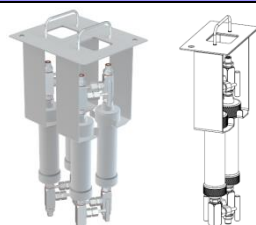
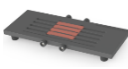
Table 2: Standard included with TB30:			
P/N	Picture	Quantity	Description
03T2322		2	Half lid and immersion holder. Contains opening in lid to view test cylinder when submerged. Two pieces of P/N 03T2322 included per bath.

Table 3: ASTM D1838 accessories			
P/N	Picture	Suggested quantity	Description
14T0118		4	Corrosion test cylinder including a works certificate: - withstand a hydrostatic test pressure of 6900 kPa - leakfree when tested at 3450 kPa with nitrogen (N2). Delivered complete with two needle valves, 1/4" NPT male thread.
31T0003		1	ASTM copper strip corrosion test standard.
31T0007		10	Copper strip with a 3.2 mm hole (one piece).
31T0001.100		1	Sanding paper silicon carbide P220 (box of 100 pieces).
12T1071		4	Flexible inert hose: - Stainless steel connectors, - 1/4" NPT female thread (both sides) - Length 60 cm, - For use with gas, - Tested up to 10000 kPa (100 Bar)
31T0000		1	Multistrip vise, holds up to four strips while polishing.
31T0005		1	Silicon carbide powder 105 µm (1 kg).

Corrosiveness to Copper of Liquefied Petroleum Gases

Accessories

Continued Table 3: ASTM D1838 accessories

P/N	Picture	Suggested quantity	Description
09T0011		4	Flat viewing test tube.
25T0928BW		1	ASTM thermometer similar to 34C with blue filling (low-hazardous) to ship. Temperature range +23°C - 105°C:0.2°C. Supplied with works certificate.
25T2154		1	Thermometer holder 425 x 10 mm.

Table 4: Spareparts for LPG cylinder

P/N	Picture	Suggested Quantity	Description
24T0388		10	O-Ring NBR 37 x 43 x 3 mm.
23T0024		2	High pressure (400 Bar) needle valve, 2 x 1/4" NPT male thread.

Table 5: Options for TB30 bath

P/N	Picture	Suggested Quantity	Description
03T2324		1	Cover for copper or silver corrosion test conform ASTM D130, D7667 and D7671. Used in combination with other lid, like P/N 03T2322 or P/N 03T2320.
14T0101		3	Lid and mounting hook. Three pieces needed in combination with P/N 03T2324.