

NEWSLETTER

Tamson Instruments

November 2023

As electric vehicles become more advanced, the need for cutting-edge coolant systems has skyrocketed. Special coolants for EV fluids are being developed. Demand is growing for improved EV battery coolants that offer superior heat dissipation and can keep up with today's innovative technology. The global EV coolants market size is expected to be around US\$ 297.2 million in 2023. A report on the EV coolants market predicts the overall valuation to reach up to US\$ 3.7 billion by 2033. So, the market for EV coolants is expected to grow rapidly.

New ASTM D8485 test method

Recently, ASTM published a new glassware corrosion test for Fuel Cell and Battery Electric Vehicle Coolants. The test subjects stainless steel, aluminum and copper test specimens to the coolant for 336 hours at a constant temperature of 80 °C while being aerated. The weight gain or loss of each of the test specimens is reported. Coolants are to be tested as supplied without the addition of any corrosive water.

This is a new corrosion test method, which is designed around ASTM D1384, the corrosion test for engine coolants in glassware. The purpose of this test method is to determine the ability of a coolant to inhibit corrosion in Fuel Cell and Battery Electric and Plug-in Hybrid Electric Vehicles. This test differs from D1384 in that there is no corrosive water added to the test. The coolant is simply tested as it is supplied. Also, in ASTM D8485, fewer metal specimens are used compared to ASTM D1384.

Tamson ASTM D1384/D8040/D8485 bath

Tamson Instruments is providing a six position bath for these test methods. The robust and well insulated apparatus is delivered with six sets of glassware. Stand- rods with clamps to hold the glassware in the same position, six flowmeters, and tubing are included in the apparatus. Other accessories required for this test method are supplied by Tamson as well.



Primary benefits of using Tamson Corrosion Apparatus:

- Equipped to hold up to six 1000 mL glass containers
- Levelling platform can be adjusted to line up the height of the bath fluid level with the 1000 mL glass containers
- Large enough reservoir to keep the bath temperature stable during the entire period of sample heating
- Very precise temperature control (better than $\pm 0.02^{\circ}\text{C}$)
- Metal parts made from stainless steel
- The cover of the bath is equipped with a separate opening to fill the bath
- Bath is equipped with a pump to circulate the bath medium to an external application when not used for corrosion tests
- Bath can be safely emptied using the bath drain
- Brackets to hold up to six flow meters
- Flowmeters are delivered with marking for the correct airflow and a certificate traceable to national standards
- Complete apparatus for six positions
- ASTM D1384/D8040/D8485 container is all made from glass, hence no rubber stopper is used. A rubber stopper is more fragile and can crack over time.

Please visit <https://tamson-instruments.com/astm-equipment/astm-d1384> to download the specification sheet.

If you have any questions or would like to receive a quotation, please contact your local Tamson distributor or contact us at sales@tamson.nl

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