

## Impact test

*Standard:* SY/T 0315-2013  
SY/T 0442-2010/18  
CAN CSA.Z.245.20-14(2015)

Equipment: Impact machine, freezer, electric spark leak detector

Test steps:

E.3.1 The single-layer epoxy impact test procedure should meet the following requirements:

a) Put the test piece in a thermostat, cool it to  $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , and keep it in this temperature range for at least 1h, put the cooled test piece into the impact testing machine, and align the wooden blocks.

b) Impact the test piece 3 times with an impact energy of at least 1.5J, and the distance between each impact point is at least 50mm. The 3 impacts should be completed within 30s after the test piece is taken out of the freezer. The spherical punch should be impacted 10 times at most. Turn to an unused position, when the total number of impacts reaches 200 times, the punch should be replaced.

c) The test piece is heated to  $20^{\circ}\text{C}\pm 5^{\circ}\text{C}$ . If the electric spark leak detector is used, the voltage should be adjusted to  $1750\text{V}\pm 250\text{V}$ . If the wet sponge leak detector is used, the voltage should be adjusted to  $67.5\text{v}\pm 4.5\text{v}$ .

E.3.2 The double-layer epoxy impact test procedure should meet the following requirements:

a) Put the test piece in a constant temperature box, control the temperature to  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , and keep at least 1h within this temperature range, put the constant temperature test piece into the impact testing machine, and align the

wooden pad.

b) Impact the specimen 3 times with an impact energy of at least 10J or 15J, and the distance between each impact point is at least 50mm. The 3 impacts should be completed within 60s after the specimen is taken out of the incubator, and the ring punch is impacted 10 times at most. Should be turned to an unused position, when the total number of impacts reaches 200 times, the punch should be replaced.

c) After the impact test, check the pinhole of the test piece, and the leakage detection voltage is 5V/um.

Authorized by	Quality Management Department	Review by	Michael Zhang	Approve By	Mark Lee
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