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Testing atmospheres simulating end use conditions

Scope

This Technical Information Paper contains recommended atmospheres to be used in the laboratory for simulating certain end-use conditions.

Safety precautions

There are no safety precautions applicable for this TIP.

Conditions

The conditions of dry bulb temperature in degrees and relative humidity expressed as percentage for the end-use conditions are:

Condition	Temperature	Relative Humidity
Standard Atmosphere (T 402)	73.4°F ± 1.8°F (23°C ± 1°C)	50% ± 2%
Preconditioning (T402)	72°F - 104°F (22°C - 40°C)	10 - 25%
High Humidity	73°F ± 2°F (23°C ± 1°C)	85% ± 2 ½%
Cold Storage	40°F ± 2°F (4°C ± 1°C)	85% ± 2 ½%
Tropic	90°F ± 2°F (32°C ± 1°C)	90% ± 3%
Tropic (ISO)	80°F ± 2°F (27°C ± 1°C)	65% ± 2%

Moisture content determinations should be made on the material at differing conditioning times to determine if the equilibrium moisture content, use TAPPI T 550 “Determination of Equilibrium Moisture in Pulp, Paper, and Paperboard for Chemical Analysis.”

If appropriate to the studies being done, testing of the samples may be performed immediately after removal from the conditions in order to test the properties at these conditions.

Keywords

Conditioning, Atmosphere, Humidity, Standard conditions, Temperature, Test conditions

Additional information

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