

CARB Certification

Supervision of uncoated particleboards, fibreboards and plywood according to the Final Regulation Order of "Airborne Toxic Control Measure to Reduce Formaldehyde Emission from Composite Wood Products", 93120-93120.12, title 17, California Code of Regulations, § 93120 in relation to requirements of § 93120.2 (a) "Formaldehyde Emission Standards for Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)" – table 1.

Plant qualification

Main topics:

- Quality control manual
- Acceptable quality control facilities and personnel
- Establishing a small scale quality control test method (FPC)
- Qualifying test (to confirm adherence to CARB regulation)
- Establishing a correlation for FPC method and large chamber ASTM E 1333 or ASTM D 6007

Inspections

After a plant has qualified for certification, periodic on-site inspections to ensure full compliance with the provisions of the requirements of standard and the plant's quality control manual become necessary.

Frequency and procedure

These inspections will occur quarterly. Cooperation by the producer in all aspects of his inspection is necessary..

The cooperation includes:

- Reviewing formaldehyde emission quality control records
- Reviewing the quality control manual and keep it actual
- Selection of sample panels for emission testing according to existing contracts
- Reviewing production records for press times and urea-formaldehyde resin usage
- Examining in-process formaldehyde emission quality control procedures as deemed necessary
- Testing of qualified quality control employees (conducting witness or Round Robin Tests)

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Quality control manual

Main topics of content:

- Organizational structure of the quality control department e.g. using an organigram
- Sampling procedures
- Method of handling samples
- Frequency of quality control small scale testing
- Procedures to identify changes in formaldehyde emissions resulting from production changes (e.g. increase in percentage of resin, an increase in formaldehyde/urea molar ratios in the resin or decrease in press time)
- Provisions for additional testing
- Record keeping requirements and information of manufacturing process (average percentage of resin, press time for each product type and thickness)
- Procedure of handling non complying material

Quality control facilities and personnel

- Equipment shall be calibrated in accordance with the equipment manufacturers' instructions
- Equipment calibration records shall be maintained
- Training of employees regularly

Establishing a small scale factory production control test method

The following small scale tests are approved for factory production control testing (FPC) as long as a correlation to ASTM E 1333 has been established:

- Perforator-method ISO 12460-5
- Gasanalysis-method ISO 12460-3
- ASTM D 6007, ASTM D 5582
- JIS A 1460
- DMC
- GPTM

Qualifying test

The tested material has to apply to the Final Regulation Order of "Airborne Toxic Control Measure to Reduce Formaldehyde Emission from Composite Wood Products", 93120-93120.12, title 17, California Code of Regulations, § 93120 in relation to requirements of § 93120.2 (a) "Formaldehyde Emission Standards for Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)" – limit values as mentioned in table 1 of the regulation.

Correlation

Other test methods must be shown to correlate in a statistically significant way to ASTM E 1333 and such correlation requires a statistically significant sample size.

- Establish a correlation for FPC method and American chamber test
- Calculation of Quality Control Limit value (QCL)
- Samples have to be tested by using an approved small scale quality control method used by the manufacturers' lab