

## The procedures to be a CARB certified manufacturer

### A. Manufacturer Preparation:

#### 1. Training the QC Manager and QC employees (Personnel who conduct chemical analysis test in Formaldehyde Emission test at the manufacturer).

Mutu Certification provides two kinds of training, which are:

- a. Preparation of Quality Assurance requirements for manufacturer based on Appendix 2, Section 93120.12, California Code of Regulation
- b. Formaldehyde emission test based on ASTM D 5582 (Desiccators method)

The training may be conducted by Mutu Certification at each manufacturer's plant or in a training event in a country region for several manufacturers.

#### 2. Prepare the QC facilities for conduct LFE testing

Manufacturer must prepare QC facilities for conducting formaldehyde test based on ASTM D 5582, such as spectrophotometer, desiccators, chemical reagent, etc.

#### 3. Prepare the documents

After training, Manufacturer must prepare QC Manual and other procedures based on Appendix 2, Section 93120.12 of California Code of Regulation.

#### 4. Establishment of correlation value between large chamber method test and small scale method test

Each manufacturer shall work with Mutu Certification to establish the correlation value for each product type and production line. At least five data pairs must be used to establish the correlation value. Five samples must be tested using manufacturer's facilities (Desiccators method) and 5 samples sets must be tested using Mutu Certification Large Chamber facility. If data does not correlate, additional sample may be required.

All LFE value of small scale method test conducted at manufacturer's plant must be shown to correlate to large chamber value.

#### 5. Preparation of Quality Control Limit (QCL)

After establishing of correlation value, factory must establish Quality Control Limit (statistical process control). QCL must be made using 30 quality control tests data, where each data is found from 1 test sample taken from each eight-hour production. The QCL will be calculated by manufacturer work with Mutu Certification.

## **B. Certification process**

After completing the contract between manufacturer and Mutu Certification, the certification process will be conducted as follow:

### **1. Document Review**

Manufacturer shall submit the Quality Control Manual, Procedures and other relevant documents to Mutu Certification to be reviewed. Mutu Certification will give comments on the sufficiency of the documents.

### **2. Initial Plant Qualification**

#### **2.1 Initial Audit**

Mutu Certification will conduct audit at least once to the manufacturer's plant. The purpose of the audit is to verify that quality assurance of manufacturer complies with the requirements. The matters to be checked are:

- a. A written quality control manual;
- b. Organization structure, including QC manager, QC Employee;
- c. Actual condition of QC Manager and QC Employee and their CV;
- d. QC facilities;
- e. Manufacturing facilities;
- f. Manufacturing and QC Standard;
- g. Routine small scale testing data;
- h. Procedure for selecting samples;
- i. Correlation values between the routine small scale quality control test(s) and the primary or secondary method test(s);
- j. Quality Control Limit
- k. Production process and actual measurement.

#### **2.2 Initial Large chamber method Testing**

Mutu Certification shall work with manufacturer to ensure that the products of the manufacturer are complied with formaldehyde emission standard Phase 1 or Phase 2.

During Initial Plant Qualification, auditor Mutu Certification shall work with manufacturer to choose samples randomly from a single lot of each product type and production line to be certified, handling and shipping the sample to laboratory of MUTU CERTIFICATION to be tested based on Large Chamber Method Test.

### **3. Certification**

If manufacturer pass the Initial Plant Qualification, the manufacturer will be given an ARB-approved TPC number and is allowed to label its products with the ARB-approved TPC number.

## CERTIFICATION RPROCESS FLOW CHART

