P.T. CHANG CHUN DPN CHEMICAL INDUSTRY

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MMC (MELAMINE MOULDING COMPOUND)

INTRODUCTION

MMC product of PT. CHANG CHUN DPN CHEMICAL INDUSTRY. is a high class,cellulose filled melamine foemaldehyde material. It is available in various colours and produces moulding with surface hardness unsurpassed by many other plastics.
MMC is particularly valuable for the moulding of high quality dinnerwares and many other applications for domestic and commerical use. Moulded parts with MMC comply with the requirement of ASTM D-704-62 Type I, JIS k6917, JIS S-2029, CNS 2985 and the Food Hygienic Quality Standard established by Japanese Ministry of Health and Welfares.

CHARACTERISTICS

Moulded articles with MMC exhibit the following properties:

* Hard, durable surface with superior luster. Resist ti scratch.
* Unlimited colour possibility and stability.
* Excellent hot water durability. Pepeated boiling does not affect appearance.
* Excellent resistance to acid, alkali, detergent and organic solvents.
* Free from taste and odor.
* High resistance to dry heat.
* Excellent electrical properties.

MOULDING

MMC is supplied in fine powder from which is suitable for preforming on compression moulding. Moulding conditions vary with the product sharp, thickness. High quality products can be obtained by using optimum moulding conditions.

Standard moulding conditions are given below for reference:

Temperature (Mould Surface)	165 ± 10°C (330±20° F)
Pressure	150－ 450 kg/cm^2 (2100-6500 PSI)

Curing Time (170°C, preheated)

1.5 mm thick	30-50 second
3.5 mm thick	50-80 second
5.0 mm thick	70-100 second

The recommended test to determine optimum time comprises of boiling a test piece in 0.8% sulfuric acid solution for ten (10) minutes, A well cured part will show no chalking.

PREHEATING

MMC can be moulded without preheating. However, preheating is strongly recommended, especially when a thick part is moulded. The use of preheating preforms will obtain following advantages:

* It can eliminate complicated moulding cycle and reduce the curing time.
* It can give the moulded parts a good appearance and optimum properties.
* It permits the use of lower moulding pressure to reduce the damage of mould and press.

High frequency heating is preferred. The optimum preheating temperature is 90 -110°C (200-230°F).

PACKING

MMC is packed in 20 kg paper bags.

STORAGE AND HANDING

MMC should be kept in air tight bags at a cold, dry place below 30°C (85°F), preferrably 20°C (70°F) and below 50% of relative humidity. When stored under such good conditions, MMC has excellent storage characteristics for a duration of approximate six (6) months after the date of production.

In handling MMC good housekeeping is important. Dust removal in area where powder is handled should be provided for the use of suitable exhaust system.

PROPERTIES

Specific Gravity	JIS K6911	1.47-1.55
Water Absorption, Normal	JIS K6911	0.8% maximum

Boiling		1.0% maximum
Moulding Shrinkang	JIS K6911	0.8-1.0%
Heat Resistance (125℃, 2 hr)	JIS K6911	No remarkable change
Colour Fading Test	JIS K6911	Good
Flexural Strength	JIS K6911	9-13 Kg/mm^2
Charpy Impact Strength	JIS K6911	2-3 $Kg\text{-}cm/cm^2$
Rockwell Hardness	JIS K6911	115-125M scale
Insulation, Normal	JIS K6911	10^{10}-10^{11} ohm
Insulation, boiling	JIS K6911	10^{8}-10^{10} ohm
Arc Resistance	JIS K6911	100 sec. minimum
0.8% H^2SO^4 boiling Test (10 minutes)		no change