

KES

Test Method of
G.M.T Sheet Material

KES T – L509

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Contents

1. Scope of Application
2. Purpose
3. Test Method



1. Scope of application

This standard shall prescribe about test method of G.M.T sheet material used as bumper reinforcement.

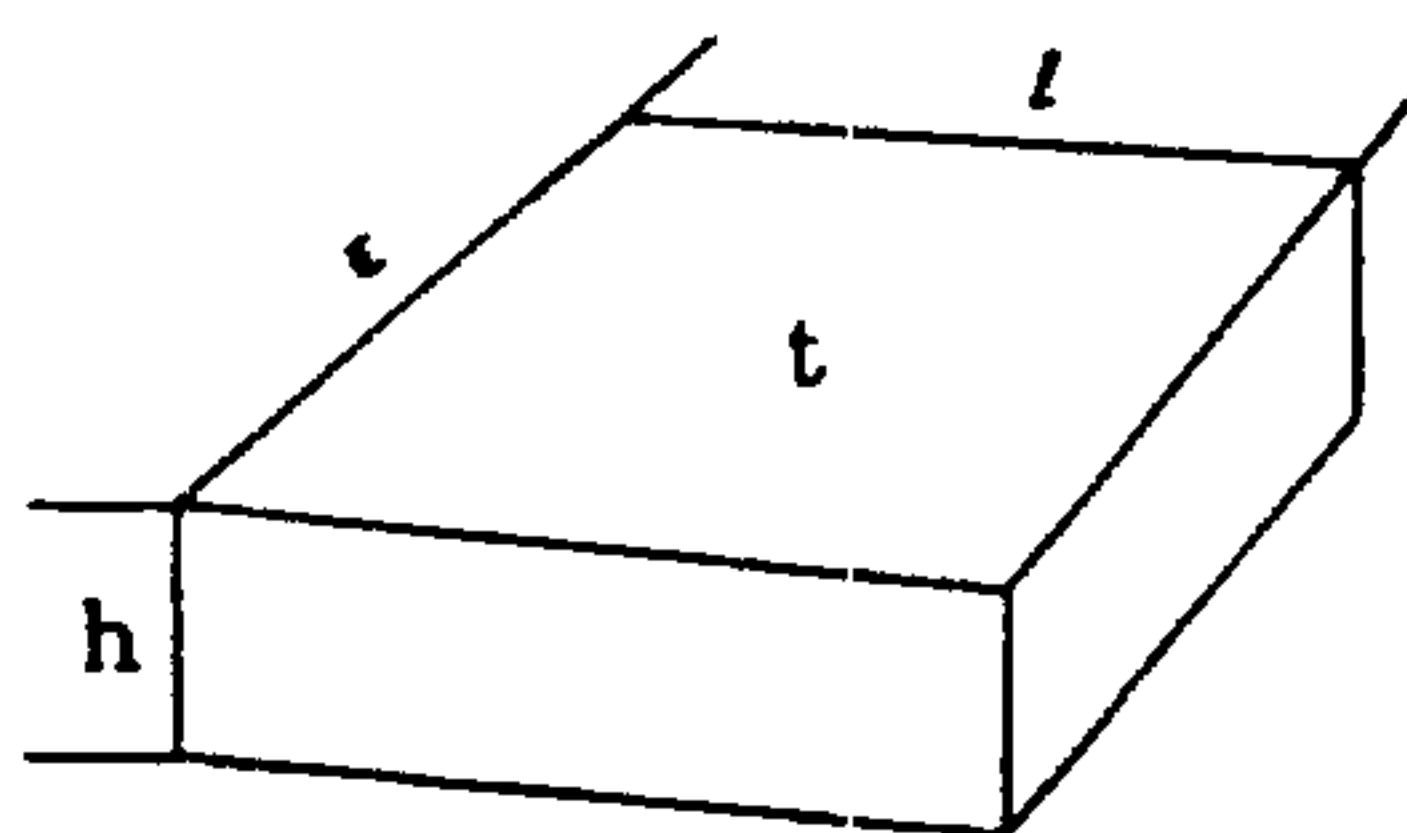
2. Purpose

It shall prescribe about test method of general G.M.T sheet material

3. Test method

3.1 G.M.T. sheet standard forming product and taking method for test sample (Q.C box mryhod)

(1) Forming size



$$l = 295\text{mm}$$

$$w = 178\text{mm}$$

$$h = 70\text{mm}$$

$$t = 5 \pm 0.5\text{mm}$$

(2) Condition of heating

For about 3min and half ,heat at infrared heater with surface temperature of blank 215℃.

(3) Condition of press

Heat with Mold temperature being about 40℃ , pressurization holding time about 30sec, pressurization speed 12m/sec and pressurization 100T(165kg/cm² per cast dimension).

(4) Size and number of sheet of Blank

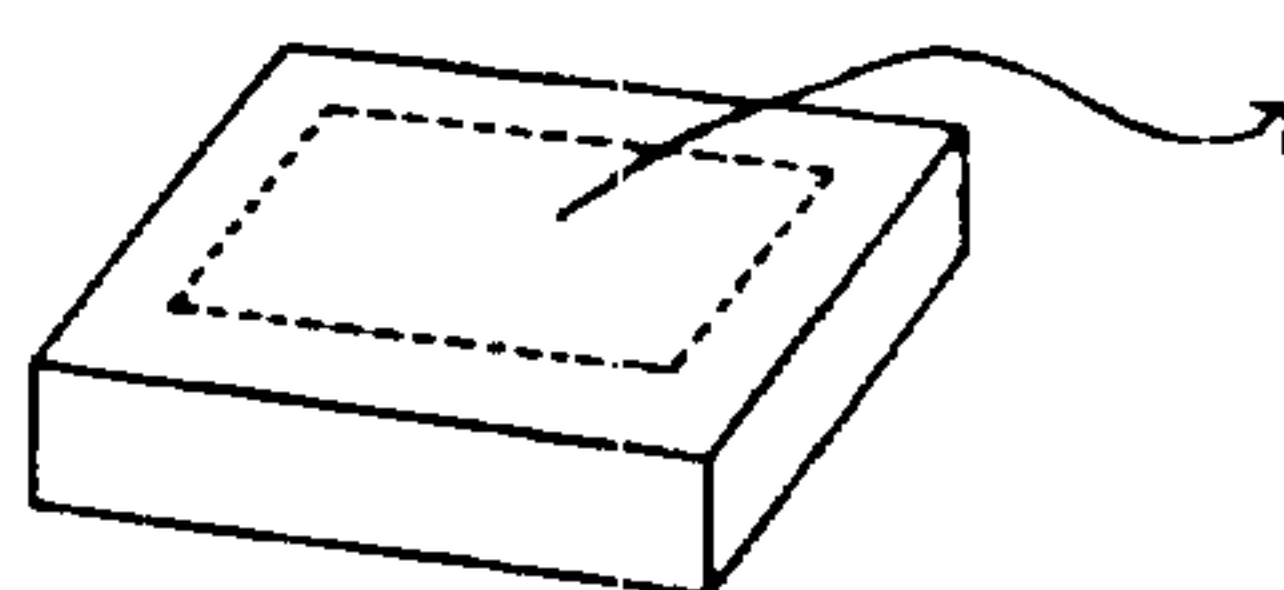
In case of measuring MD property of matter, 260mm (MD) x 150mm(TD)

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Decide the thickness while arranging umber of sheet with 5±0.5mm thickness

Ex) In case of 3.8mm thickness blank, use 3 sheet as usual.

<Taking parts>



Central part of blank
(Excluding the edge part)

Produce every test sample after cutting the upper part of the plastic in Q.C box indicated at figure.

3.2 State adjustment of G.M.T sheet and standard state of test place.

- (1) Standard temperature state : Standard temperature should be $23\pm 2^{\circ}\text{C}$
- (2) Standard humidity state : No special regulation
- (3) State adjustment time : State adjustment time should be 24 hour as a rule.
- (4) Standard pressure : No special regulation
- (5) Standard state of test place : Without any special regulation, standard state of test place should be the same with state adjustment of specimen or sample.

3.3 Measuring method for measuring content of glass fiber G.M.T.

- (1) Standard temperature of the test place should be $23\pm 2^{\circ}\text{C}$
- (2) State adjustment of the sample : No special regulation
- (3) Standard size of specimen should be $70 \times 70 \times 5\pm 0.5\text{mm}$ and do sampling to 5 specimen.
- (4) Test method : Put sample to electric heater to heat and freeze at normal temperature, then measure G/fiber contents rate with followed formula

$$\text{Contents rate of G/fiber} = \frac{W_2 - W_0}{W_1} \times 100 (\text{wt}\%)$$

W_0 : Weight of pot in electric heater (g)

W_1 : Weight of specimen

W_2 : Weight of pot and specimen after carbonization

Test data is to be averaged by evaluation value of $n = 5$.

3.4 Method for measuring specific gravity of G.M.T sheet.

- (1) Standard temperature of the test place should be $23\pm 2^{\circ}\text{C}$
- (2) State adjustment of the sample: State adjustment of the sample is to be left alone in state of 24Hr at test place.
- (3) Standard size of specimen should be $70 \times 70 \times 5\pm 0.5\text{mm}$ and do sampling to 5 specimen.
- (4) Test method: Calculate the specific gravity using decimeter with followed formula.

W_1 : Weight of specimen in the air (g)

W_2 : Weight of specimen in the distilled water

K : Density of distilled water and temperature adjustment

Specific gravity : $\frac{W_1}{W_1 - W_2}$

Test data is to be averaged by evaluation value of $n=5$

3.5 Tensile test method for G.M.T sheet

- (1) State adjustment of specimen and test temperature.

Specimen is adjusted to temperature(Normal temperature $23\pm 2^{\circ}\text{C}$) for more than 24