

## (4) Iron Ball Drop Test

Iron Ball Drop Test
500 g Iron ball, $90 \mathrm{~cm} /$ height
Heat Resistance Test
Thermoforming Test
Hot-pan Test
UV Test


## (4) Heat Resistance Test

Iron Ball Drop Test
Heat Resistance Test
1 hour in $170^{\circ} \mathrm{C}$ oven
Thermoforming Test
Hot-pan Test
UV Test

$\Delta E: 1.61$

## Mixed Product

## Discoloration


$\Delta \mathrm{E}: 22.87$

## (5) Thermoforming Test

Iron Ball Drop Test
Heat Resistance Test
Thermoforming Test
Being formed after 1 hour in $170^{\circ} \mathrm{C}$ oven

## Hot-pan Test

UV Test


## Mixed Product



## (5) Hot-pan Test

Iron Ball Drop Test
Heat Resistance Test
Thermoforming Test
Hot-pan Test
Putting $280^{\circ} \mathrm{C}$ hot-pan for 10 minutes

UV Test


## (5) UV Test

Iron Ball Drop Test
Heat Resistance Test
Thermoforming Test
Hot-pan Test
UV Test
250 hour in accelerated weathering test machine (equivalent to 375 days)

$\Delta E: 0.58$

$\Delta \mathrm{E}: 9.9$

## Mixed product claims

One year after Installation (Goyang city, Korea)


## Product Specification

| Product | HI-MACS ${ }^{\text {® }}$ | Mixed Products |
| :---: | :---: | :---: |
| Main Component | - Approx. 40\% MMA + PMMA | - Approx. 35\% UPE + 5\% MMA |
| Hygiene | - Eco-Friendly proven Certificate (NSF) <br> - Harmless to Human body | - No proven Data <br> - Harmful dregs like Styrene Monomer possibly remain |
| Strength | - Excellent <br> - Flexural Strength: $6.643 \mathrm{Kgf} / \mathrm{m}^{2}$ | - Subject to be broken or damaged by impact <br> - Flexural Strength: $3.247 \mathrm{Kgf} / \mathrm{m}^{2}$ |
| Hardness | - Excellent <br> - Barcol hardness: 61 | - Subject to be scratched <br> - Barcol hardness: 50 |
| Discoloration in natural weather condition (in 375days) | - no visible change <br> - $\Delta \mathrm{E}: 0.62$ | - Subject to be yellowish <br> - $\Delta \mathrm{E}$ : 16.91 |
| Discoloration by heat <br> (1 hour in $170^{\circ} \mathrm{C}$ oven) | - Low Discoloration <br> - $\Delta \mathrm{E}: 1.61$ | - Subject to be yellowish <br> - $\Delta \mathrm{E}: 22.87$ |
| Fire Resistance | - Classified as B1 | - No classification data <br> - Estimated to be classified as B2 |
| Thermoforming | - Suitable | - No Recommended |

