

MC-PET (Micro-Foamed PET Light-Reflective Sheet)

Furukawa Electric successfully developed the world's first industrial production process for Super Energy Saving Micro-Foamed PET Light-Reflective Sheet (MC-PET).

1. What is MC-PET?

The process uses clean carbonic acid gas as a foaming agent to make PET (polyethylene terephthalate), which can be recyclable by foaming PET material to five times the original volume (bubble fraction: 80%) and then shaping the foamed material into a white foamed sheet with a thickness of 1 mm. In particular, bubbles in the sheet have an average size of 10 μ m or less.

2. What is MC-PET's feature?

A. Super Energy Saving 50% to 70%

These fine bubbles result in excellent optical characteristics, such as an overall visible light reflectivity of 99% or higher and a diffuse reflectance of 95% or higher

B. Natural Color

Our M-CPET reflects both red light and blue light at equally high reflectance levels, while conventional reflective sheets (metal reflective sheet with mirror surface) have a lower reflectance for visible light with longer wavelengths (red light) than for light with shorter wavelengths (blue light)

C. Minimize Unevenness of Light

Ultra thin sign fixture (40 mm) with even light distribution can be possible because strip patterns caused by internal lights are sharply reduced.

D. Easy to use

MCPET is a plastic reflective sheet, which means that it is flexible and can be easily bent, cut or otherwise processed, or have bend lines marked on it.

Since the diffuse reflectance is very high at 95% or above, MCPET does not require extra consideration regarding angle of reflection, which must be designed with strict precision in many cases.

3. Where is MC-PET used?

For example, many products utilize our MC-PET, such as;

- ♣Sharp's Aquos (LCD flat TV) to make thinner and get even light distribution
- ♣Sign for Nationwide Convenience Stores to cut millions of annual energy cost
- ♣Built-in Lighting Fixture in Offices, Stores and Restaurant
- ♣LED Sign on Lexus Dealers

MC-PET can be effectively utilized with all types of surface light sources using cold-cathode tubes, fluorescent lamps and LED, as well as in other applications such as where a light source is located inside a box-shaped lighting fixture whose front side is open