

# eurocell<sup>®</sup>

## samples of usage

### MOLDING TECHNOLOGY

When adding **eurocell**<sup>®</sup> to a mixture it is important that it be completely wet out. The use of a low speed folding type of mixer unit will distribute the **eurocell**<sup>®</sup> particles with minimum breakage. Where heavy coats are desired and/or a high blend of pigment is required, use a high shear mixer first. Then transfer the material to a low shear mixer and add **eurocell**<sup>®</sup>. Some of the simplest procedure errors, such as mixing sequence, cause the greatest problems in processing.

When formulating, try the following sequence: Start with the resin. Then add pigment, catalyst, and then **eurocell**<sup>®</sup> in sequence. Mix the composite in a low shear type mixer at low speed. The dispersion will be rapid and mixing time will be short, depending upon the viscosity required of the mixture.

### **eurocell**<sup>®</sup> WITH POLYESTER RESIN

Polyester/**eurocell**<sup>®</sup>-compounds are currently being used in the production of lamp bases, table bases, furniture trim, arms and legs for sofas and beds and simulated wood carvings.

Intricately designed parts can be mass produced at a fraction of the costs of wood. These parts have the appearance and feel of wood and can be nailed and sanded, then stained or painted.

The following is a starting formulation designed to assist your research and development department (this not a finished formula, and does not represent a final solution. Use only as a starting guide.):

50 kg	Resin (low viscosity)
42 kg	CaCO <sub>3</sub> or silica flour
6 kg	<b>eurocell</b> <sup>®</sup>

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### ROTATIONAL MOLDING

Hollow plastic products utilizing **eurocell**<sup>®</sup>/resin mixtures are made on equipment similar to the photos on our brochure. A starting guide for formulation is:

48 kg	Resin (low viscosity)
42 kg	CaCO <sub>3</sub> (7 - 10 microns)
6 kg	<b>eurocell</b> <sup>®</sup>

To use **eurocell**<sup>®</sup> most effectively, process at low pressures. This helps to disperse it through the matrix. Increasing the heat of the resin reduces its viscosity and maximizes filler loading.

### CASTING

A multi-mold continuous resin transfer molding line has produced tubs and vanities with smooth hardwearing gel-coated surfaces. The technique is to spray a female form with gel coat. Use formula shown below and pour into the mold. The male mold is sprayed with glass fiber and pushed into the mix. A starting formula is:

50 kg	Resin (low viscosity)
42 kg	Marble Dust (7 - 10 Mikron)
6 kg	<b>eurocell</b> <sup>®</sup>

### SYNTACTIC FOAM

Syntactic Foam ist the controlled placement of microscopic air in a resin. The use of **eurocell**<sup>®</sup> in the resin greatly improves the finished properties due to the structural integrity of its cellular structure. Floatout is controlled and mixing time is improved. With proper equipment this foam may be sprayed or pumped. Boat hulls may be reinforced with syntactic foams utilizing design, since foreign materials such as wood or metal may not be required to build in rigidity. A suggested formulation fo syntactic foams is:

80 kg	Thixotropic resin
20 kg	<b>eurocell</b> <sup>®</sup>

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### SMC/BMC

The polyester thermoset resin may be flexible type, rigid, or any combination to meet various conditions. A typical formulation is

50 kg	Resin
40 kg	Fiber glass
10 kg	<b>eurocell<sup>®</sup></b>

### PUTTY

Used for furniture repair, auto body putty, wood filler, etc., a typical formulation would consist of:

55 kg	Resin
35 kg	Talc
10 kg	<b>eurocell<sup>®</sup></b>

This can be modified to have glass reinforcement as in the boat industry, and can be pigmented.

### PAINTS AND COATINGS

**eurocell<sup>®</sup>** extends the resin and helps prevent UV degradation. For stucco mix, replace all fillers with **eurocell<sup>®</sup>**. This will result in thick, lightweight mixture. For more convenient paints, use of as little as 3 % **eurocell<sup>®</sup>** by weight will economically extend the resin and reduce shipping weight.

### FRP SANDWICH PANELS

Fiber glass reinforced plastic skins on both sides of a syntactic form is an effective means of building mass and rigidity without increasing the part's weight or cost. By incorporating **eurocell<sup>®</sup>** in the laminating skins, a greater cost savings can be utilized. **eurocell<sup>®</sup>** performs well in air-less spray equipment. A 6% loading of **eurocell<sup>®</sup>** is a commonly used formula for FRP laminates.