Fantastic Plastics: Thermo Plastics and Costumes

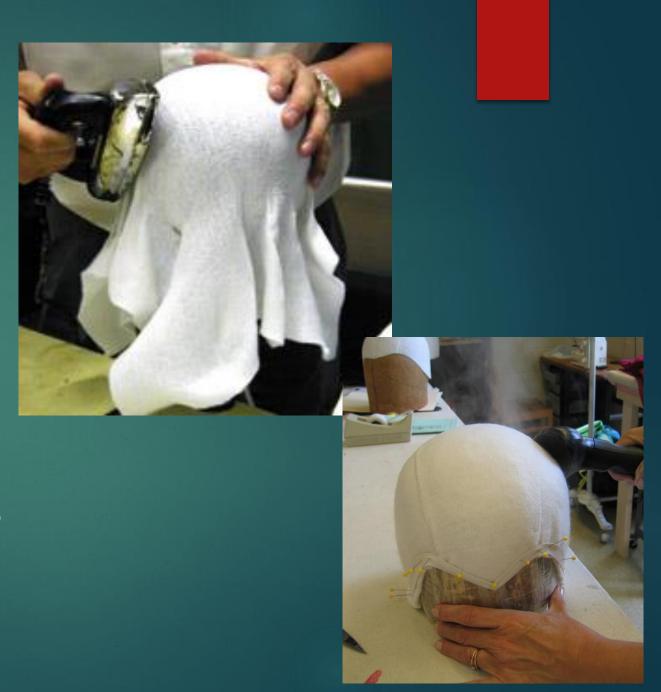
BILLY WILBURN — SOUTH DAKOTA STATE UNIVERSITY

RICKY GREENWELL — MINNESOTA STATE UNIVERSITY MOORHEAD

CANDY MCCLERNAN — WONDERFLEX WORLD — CREATIVE DIRECTOR

Fosshape

- A unique nonwoven felt like fabric
 - comprised of a low melt synthetic polyester fiber
 - when exposed to varying degrees of heat (200 degree F range) and pressure, you can create a multitude of crafted items
- Fosshape comes in two weights 300 and 600
 - FOSSHAPE 300 is lighter in weight and thinner than FOSSHAPE 600 for lighter weight needs and more intricate design efforts
 - With heat and pressure from a steam iron, two layers of the 300 grade can be combined or bonded to approximate one layer of FOSSHAPE 600



Fosshape

- Often called the "buckram replacement", this unique felt-like fabric (45" wide or 114.3 cm) is heat activated to achieve rigidity, stiffness and surface enhancement without the use of water, messy or hazardous additives
- Easily cut with scissors, will not fray like conventional woven fabrics and can be readily sewn to itself or other fabrics as a hidden stiffener or shaped into stand alone structures
- Mildew resistant and dye-able
- Fabric steamers are the often preferred method for forming a desired amount of rigidity and stiffness, but conventional steam irons or an industrial hot air gun may oftentimes be helpful. The level of stiffness is achieved by adjusting heat, time and pressure
- Can be molded over any shape you like. It will hold a firm structure, but remains flexible
- Remember to allow for shrinkage

300 1 to 9 yards is \$13.25/linear yard(45" x 36"= 1 yard)10 to 49 linear yards and only pay \$11.25/yard 600 1 to 9 yards is \$26.00/linear yard(45" x 36" = 1 linear yard10 to 49 linear yards \$22.00/yard

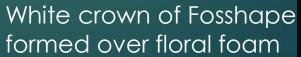
Fosshape



Made for the Carolina Ballet production of Pinocchio



Top hat by Bill brewer





Masks and Head Pieces

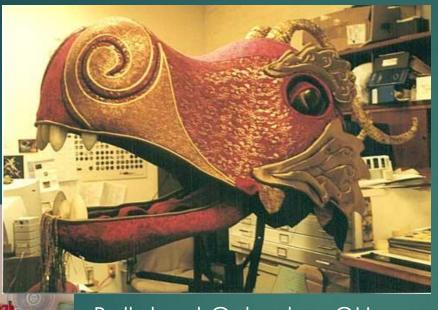








Masks



Balletmet Columbus OH touring shows. Design and construction by Barb Taylorr

Amy Stringe at the University of Colorado at Denver. For "Rhinoceros" by Eugene Ionesco



Costume Works Inc.



Props









Taco shell by Anna Warren

Cosplay



Groot costume by Dawn Scribner
Body of Fosshape, head of Wonderflex





Wig Base



Hair hat by Casey Goshen made with Fosshape, Vinyl Spackle, and Plastidip Spray.



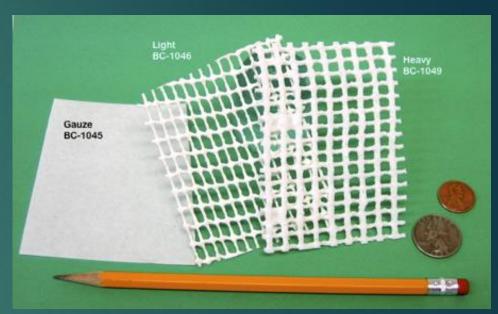
Silicone wig PlayMakers Repertory Co. Worn in a pool for the rep. Fosshape base is mildew and water resistant



Feather pad wig for Cabaret PlayMakers Repertory Co.

Varaform Properties

- A cotton mesh impregnated with a thermoplastic resin
- Originally developed in the 1980's for setting broken limbs
- Comes in three weights
 - Heavy- thick, rigid, works great as support for projects
 - Light thinner, great for more precise molding
 - ▶ Gauze Very thin, great for details
- Can be cut with scissors
- Softens in hot water(160 degrees) or with a heat gun. Once soft you will have between 2-4 minutes working time. Can be reheated many times.
- Layers can be joined together with pressure.
- Can be painted or covered with a variety of materials
- Sold by the yard (\$43-\$66)



Varaform



By Corey Johnston





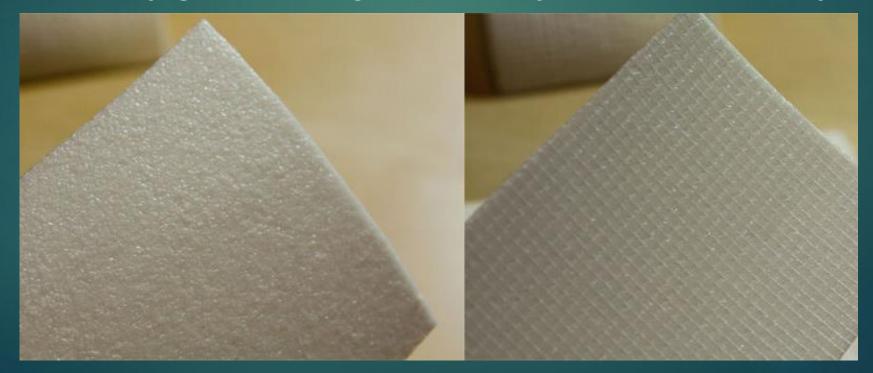




Masks by Billy Wilburn

WONDERFLEX

- AN EXTRUDED COMPOSITE SHEET MADE OF SYNTHETIC POLYMER. IT HAS:
 - a built-in adhesive
 - a layer of polyester open weave scrim
- IT IS OFTEN REFERRED TO AS THE "CELASTIC" REPLACEMENT PRODUCT
- THE SCRIM HELPS GIVE THE WONDERFLEX STABILITY WHEN IT IS HEATED



WONDERFLEX PROPERTIES

- COMES IN 43"X55" SHEETS WITH ONE SIDE SMOOTH, THE OPPOSITE SIDE HAS THE WOVEN SCRIM PATTERN
- HEAT ACTIVATED AT 150°-170° F, ACTIVATED BY STEAM, HEAT GUN, HOT WATER, OR CRAFT IRON
- CAN BE CUT WITH SCISSORS OR UTILITY KNIFE
- HAS A LONG OPEN TIME AND CAN BE HAND-WORKED OR LAID UP FOR TWO OR THREE MINUTES
- CAN BE REHEATED REPEATEDLY AS REQUIRED FOR ADDITIONAL FORMING
- WORKS WITH OR WITHOUT MOLDS. CAN BE HAND FORMED
- BONDS TO ITSELF AND WILL ADHERE TO MOST POROUS SURFACES ONCE HEAT ACTIVATED
 - Always use a release agent such as foil, or plastic wrap to ensure release from mold or form

PRICE: 1-5 SHEETS \$45.49 PER SHEET, 6-9 SHEETS \$42.38 PER SHEET

Masks



Dragon by Robert Lamarche



Groot by Dawn Scribner



Skull mask formed on clay matrix

Helmets









Celtic helmet by Candy McClernan

The Hounds helmet by Sam Kate Toney

Armor



Armor and props by cosplayer Leah Stevo lit with LEDs



Armor by Elffie Cosplay

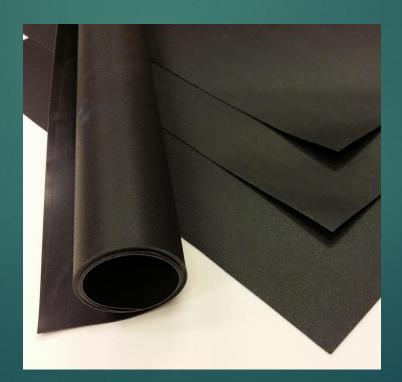


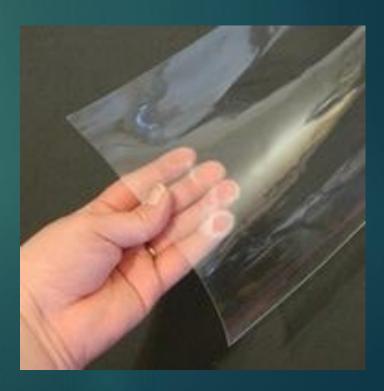
Gauntlets by Candy McClernan

Worbla

- Comes in three different varieties. Each are a non-toxic composite material
 - Worbla's Finest Art (Worbla for short)
 - Worbla's Black Art (slightly smother than Worbla)
 - ▶ TranspArt







Worbla Properties

- ► Comes in a variety of sheet sizes (largest @ 39.25" to smallest 14.5" x 9.8") with one smooth adhesive side, the opposite side has a texture
- ▶ Heat activates at 195° F, Activated by steam, heat gun, hot water, or craft iron
- Can be cut with scissors or utility knife
- Has a long work time (several minutes)
- Can be reheated repeatedly as required for additional forming
- Works with or without molds. Can be hand formed
- Bonds to itself and will adhere to most porous surfaces once heat activated
- ▶ 100% re-blendable (save all scraps)
- Layers can be joined together with pressure.
- Can be painted or covered with a variety of materials
- Because there is not built in mesh like Wonderflex you may need to sandwich it with stronger materials

Price: \$88 - \$23 depending on size of the sheet

Worbla











Armor by Nefeni Cosplay

Worbla



Armor and crown by Kamui Cosplay





Accessory by Lanthea Cosplay

InstaMorph Beads

- Made by many different companies
- Softens at 195 degrees or above
- Can be molded or shaped into anything
- Should be warmed up in a ceramic, metal, or silicone because it will stick to anything made of plastic
- Hardens as it cools
- Can be reheated multiple times
- Non-toxic but not yet certified "safe for internal use" or "food contact safe"

