hapco inc.

TECHNICAL BULLETIN

HAPCOAT 599

ELASTOMERIC, ABRASION RESISTANT, SURFACE COAT

HAPCOAT 599 is a medium hardness (shore A 90-95), grey, elastomeric, abrasion resistant, thixotropic, surface coat that is specifically designed to reproduce surface details exactly.

HAPCOAT 599 is formulated to withstand high wear continuous service. Being thixotropic, HAPCOAT 599 applies easily with a brush, and will not sag when applied to a vertical surface. HAPCOAT 599 is easily machined and can be drilled, tapped, or milled with conventional tools.

Properties such as Impact Resistance and Wear Resistance make HAPCOAT 599 especially suitable for sample and production tools, patterns and fixtures.

HAPCOAT 599 is ideally suited for foundry applications, drilling fixtures, molding fixtures, sand blasting fixtures and checking gages.

ADVANTAGES:

FAST " TACK-UP" TIME - When Parts A & B are mixed HAPCOAT 599 reaches "tacked-up" (bubble gum) state in approximately 30-45 minutes.

EXCELLENT ABRASION RESISTANCE - Continuous exposure to a high wear environment is possible with this system.

IMPACT RESISTANCE - Being elastomeric the surface is resistant to dents and cracks.

EASILY HANDLED - Being thixotropic, HAPCOAT 599 will not sag when applied to a vertical surface and allows the user a good even coat.

MACHINEABLE - Parts are easily machined with regular tools. HAPCOAT 599 can be drilled, tapped, sanded, polished, and turned in a lathe.

VERY LOW SHRINKAGE - There is almost no shrinkage during cure with HAPCOAT 597.

VERSATILE - HAPCOAT 599 can be used with a variety of curing agents to accommodate a wide range of application requirements.

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TYPICAL PROPERTIES:

Viscosity	Thixotropic
Color	Grey
Tensile Strength	2500 psi
Tensile Elongation	325%
Linear Shrinkage	none
Specific Gravity	1.2
Pot Life	45 min
Hardness - Shore A	90

MAXIMUM SERVICE TEMPERATURE:

Continuous	120^0 F
Intermittent	150^0 F

SURFACE PREPARATION TO PREVENT ADHESION:

To prevent adhesion to the mold, use a GREASE-IT release agent. The following are recommended: GREASE-IT II, GREASE-IT IV, GREASE-IT WAX-P, or GREASE-IT WAX L. For best results apply in a few thin coats, drying between coats. Porous surfaces, i.e. wood, plaster, etc., must be sealed thoroughly before release is applied. Use multiple coats of a good coating such as: a high-grade lacquer or urethane lacquer.

SURFACE PREPARATION FOR ADHESION:
For applications where adhesion is desired, the surface must be cleaned, abraded and dried. Sandblasting and mechanical roughing are the preferred ways of abrading surfaces to be bonded.
For added adhesion to metals, use Primer 200 and for added adhesion to plastic, use Primer 800.
Make sure all surfaces are clean, dry and free from moisture.

AIR RELEASE:

Use HAPCO'S ANTI-AIR to aid in air release (see Technical Bulletin). In some products, ANTI-AIR can cause a slight haze to cloudiness. This has no effect on properties.

MIXING:

IMPORTANT: Before each use, mix Part B thoroughly before proportioning out the required amount. Components may separate and should be mixed before each use. Mix only when ready to use, by adding the curing agent to the resin portion and blending together thoroughly. Be sure to scrape and stir in all material sticking to the sides and bottom of the mixing container. Do not use paper containers or wooden mixing sticks. They may contain moisture. For best results use plastic or coated containers, and metal or plastic sticks.

MACHINE MIXING AND DISPENSING:

Use HAPCO'S *RAPID*fil and/or *RAPID*shot Dispensing Equipment for fast, reliable, and efficient dispensing.

SURFACE COATS:

Brush apply a first coat of HAPCOAT surface coat, taking care to eliminate all trapped air bubbles. Use a hair dryer, moving quickly over the surface, while brushing to help eliminate air bubbles. Take care to eliminate surface air. Allow to tack up, and brush on a second coat of Hapcoat. After the second coat tacks up, apply the backup.

COVERAGE:

HAPCOATS are available in convenient and safe pre-measured containers in the following kit sizes:

Kit Size	Approximate Coverage Rate
1/2 pint kits	200 square inches
Pint kits	400 square inches
Quart kits	800 square inches
Gallon kits	3200 square inches

SHRINKAGE:

Shrinkage or dimensional variation is largely influenced by 5 factors:

1. Mass (total volume and thickness)
2. The temperature of the material
3. Maximum temperature reached during the exotherm (reaction). The faster the material, the higher the exotherm, the greater the shrinkage.
4. The temperature of the mold
5. The stability of the mold

Geometry, part thickness, and total volume vary in each design, therefore, the customer is responsible to test and determine the shrinkage factor to be used. The values in the brochures are for comparative reference only, using ASTM testing procedures.

CLEAN UP:

Cured polymers are most difficult to remove. It is best to clean tools and equipment immediately after use. Use Hapco's A-TAK for best results.

STORAGE:

Polymer systems have a minimum shelf life of six months when unopened. Both components should be stored in a room temperature dry place. When not in use, containers should be kept tightly closed.

RESEALING:

Many polymers are moisture sensitive, reseal, using one of the following two (2) methods: blanket with nitrogen or use a hair dryer for 30 seconds to cover with dry air.

PRECAUTIONS:
CAUTION: The MSDS should be read thoroughly before using this product.

Skin or eye contact with polymers should be avoided. Clean housekeeping procedures are urged and the use of gloves and/or protective creams suggested. All polymers, as a general practice, should be used in well-ventilated areas. Spot ventilation is most effective. Contaminated clothing should be removed immediately and the skin washed with soap and water or waterless skin cleaner. Should accidental eye contact occur, wash thoroughly with water and consult a physician. 2/2000

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