



Castagra Products, Inc.

Traffic Membrane Product Information Sheet

ECODUR 201 TRAFFIC MEMBRANE PRODUCT INFORMATION SHEET

A HIGH PERFORMANCE, LOW COST MEMBRANE

INDEPENDENTLY TESTED AND CERTIFIED BY HBT AGRA AS A PRODUCT SUITABLE FOR USE ON PARKING RELATED STRUCTURES AND SURFACES AS A PARKING DECK COATING

KEY DIFFERENCES IN COMPARISON TO OTHER COATINGS:

- THIS **THICKER SYSTEM** (50 TO 100 MILS) GIVES GREATER LONG TERM PERFORMANCE THAN SIMILARLY TESTED SYSTEMS,
- SINCE PRODUCT **POLYMERIZES INTO ITSELF** IT FACILITATES EASY AND EFFECTIVE REPAIRS TO PREVIOUSLY INSTALLED AREAS,
- 1/3 **LOWER COST** THAN SIMILARLY TESTED URETHANE TRAFFIC MEMBRANE SYSTEMS.

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Physical Properties and Performance Characteristics

Physical Properties and Performance Characteristics:

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| RECOMMENDED COAT THICKNESS | 0.050"-0.100" (1.3mm - 2.5mm) |
| DURABILITY - ASTM C627 | [16,000 PASSES OF AN AVERAGE SIZED CAR] [NO DEBONDING OR DETERIORATION OCCURED] |
| ESTIMATED TENSILE STRENGTH - ASTM D412 | 900 psi (6 MPa) |
| ESTIMATED ELONGATION - ASTM D412 | 50 - 100 % |
| CRACK BRIDGING | 1/16" (1.6mm) |
| ESTIMATED IMPACT RESISTANCE (IZOD) (DROPS SHARPLY AT -20°C) | 2 FT-LBSf/INCH (11 Kgf-mm/mm) |
| HARDNESS - SHORE DUROMETER | D 50 +/- 10 |
| HEAT RESISTANCE – CONTINUOUS | 200°F (93°C) |
| MINIMUM SERVICE TEMPERATURE | -20 TO -40°F (-30 TO -40°C) |
| MAXIMUM SERVICE TEMPERATURE | 200°F (93°C) |
| WATER ABSORPTION - ASTM D570 | 0.3 % |
| RAPID CHLORIDE PERMEABILITY - ASTM C1202 | 17 (NIL) COULOMBS [AFTER 6 HOURS] |



Physical Properties and Performance Characteristics (cont...)

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| TENSILE BOND STRENGTH TO CONCRETE 5 CYCLES FREEZE/THAW & WATER IMMERSION | 200 - 300 psi (1.5 - 2.0 MPa) |
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| ABRASION RESISTANCE (Polyhedron) - ASTM 4060, CS-10, 1000 Cycles, 500g load | 25.7 mg loss |
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| COEFFICIENT OF SLIP RESISTANCE – RUBBER TEST SURFACE WET/DRY – CAN/CGSB-75.1-M88 | 0.92 / 0.95 |
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GOOD GENERAL SOLVENT RESISTANCE. TESTS HAVE BEEN MADE WITH A FEW SOLVENTS. SPECIFY TYPE OF SOLVENT BEING CONTAINED AND CONDITIONS PRIOR TO ORDERING TO DETERMINE PARTICULARS.

1500 HOUR WEATHEROMETER TEST SERIES. ON A 0.020" THICK COATING OVER A POROUS SUBSTRATE, PRODUCED NO SUBSTANTIAL DEGRADATION OF THE COATING ALTHOUGH THERE WERE COLOR CHANGES WITH A GENERAL YELLOWING/FADING CHARACTERISTIC. NO WATER PENETRATION THROUGH TO SUBSTRATE WAS OBSERVED.

This information is from independently certified tests performed by HBT AGRA and Polyhedron Laboratories, under a program of their design, based on properly installed product. Since conditions of use are beyond our control, we do not assume any liability except to replace that quantity, in containers, of the product which is defective and for which we are responsible.



Some Liquid (un-cured) Product Properties

Some Liquid (un-cured) Product Properties:

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| MIX RATIO BY WEIGHT | 83 PARTS CATALYST (PART A) 17 PARTS RESIN (PART B) (or 5:1 PBW) |
| POT LIFE 100 GRAMS AT 23°C (EASILY VARIED) | LESS THAN 45 MINUTES |
| RECOMMENDED CURE CYCLE | 36 HOURS AT 23°C |
| MIXED VISCOSITY AT 23°C | 2000 - 3000 CPS |
| RESIN VISCOSITY AT 23°C | 200 CPS |
| CATALYST VISCOSITY AT 23°C | 6000 - 10000 CPS |
| SPECIFIC GRAVITY (APPROXIMATE) (Mixed S.G. depends on blowing) | CATALYST : 1.4 RESIN : 1.2 MIXED (MAX) : 1.4 |

- At room temperature, vapors are low due to low vapor pressure. Provide local and/or local exhaust to control airborne levels. Spraying and certain other operations may generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects.
- This coating is comprised of 100% solids and does not contain any flammable solvents. Eye protection must be used for all applications. In case of eye contact, wash thoroughly and contact a physician immediately. For spraying applications, use approved NIOSH breathing equipment. In the event of skin contact, wash thoroughly with soap and water. Refer to MSDS for further information.



General Finished Product Characteristics

General Finished Product Characteristics:

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| FLEXIBILITY | VARIABLE - BASED ON CHANGING CAT:RESIN RATIO. |
| ODOR | THIS MATERIAL CONTAINS NO VOLATILE SOLVENTS. IT IS A VEGETABLE OIL DERIVED PLASTIC WHICH HAS A PLEASANT NATURAL ODOR PRIOR TO CURING WHICH IS QUITE MILD. THE ODOR DISAPPEARS ONCE THE MATERIAL IS FULLY CURED. |
| FIRE PERFORMANCE | WHEN TESTED IN ACCORDANCE WITH CAN/ULC S102-M88 STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AND ASSEMBLIES, THE FLAME SPREAD CLASSIFICATION IS "1" OR "A" WITH A FLAME SPREAD VALUE OF 15 FOR THE PRODUCT USED AS A DECK COATING. FOR REFERERNC, UNTREATED RED OAK IS A COMBUSTIBLE MATERIAL THAT HAS A FLAME SPREAD CLASSIFICATION OF 100 AND INORGANIC REINFORCED CEMENT BOARD IS A NON-COMBUSTIBLE MATERIAL THAT HAS A FLAME SPREAD CLASSIFICATION OF ZERO. {CAN/ULC S102-M88 (Inchcape Warnock Hersey)} |
| WATER RESISTANCE | HIGH RESISTANCE TO WATER, SEA-WATER. HOT OR COLD. |
| SOLVENT RESISTANCE | HIGH RESISTANCE TO MOST COMMON PETRO-CHEMICAL SOLVENTS. ONE NOTED EXCEPTION IS p-STYRENE MONOMER. |
| ULTRA-VIOLET | UV CAUSES THE MATERIAL TO BECOME MORE YELLOW IN COLOR AFTER PROLONGED EXPOSURE. NO SUBSTANTIAL DEGRADATION OF COATING HAS BEEN FOUND ON 5 YEAR FIELD SAMPLES OR 1500 HR WEATHEROMETER TESTED SAMPLES. |
| MAINTENANCE | EASY TO CLEAN DIRTY SURFACE, ETC. WITH MOST SOLVENTS AND DETERGENTS. |
| ADHESION | BONDS TO WOOD, CONCRETE, ITSELF, ASPHALT, TAR, PAINTS, ETC. |
| REPAIRABILITY | SINCE THE MATERIAL BONDS TO ITSELF. JOINTS, DEFECTS, ETC. CAN BE READILY SERVICED WITH MINIMAL SURFACE |



Application Directions & Storage

OR SUBSTRATE PREPARATION.

Surface Preparation for Concrete:

- NACE No. 6/SSPC 13

Application Directions:

Stir each container thoroughly (separately) prior to use,

Weigh out 5 parts Catalyst side to 1 part Resin side,

Mix the two parts together thoroughly,

Apply to clean, dry surface using notched squeegee to build to 0.050" - 0.100" total thickness in a single coat or a two coat combined application,

For non-skid, broadcast silica or similar hard material evenly over coated surface to achieve specified non-skid requirements.

Optional: roller apply more product after non-skid has been applied to encapsulate grit.

Cure until tack free [approximately 24 hours at 65°F (23°C)],

Notes:

- No primers/sealers required. Cross roll or air blast to remove surface air bubbles during first hour of cure,
- Subsequent coats can be applied to partially or fully cured surface.
- For filling large holes or voids, simply trowel up to 2 inches thick of product into the holes/voids.

Storage:

Part A:

- Storage Temperature: No less than 32°F (0°C)
- Storage: Recommend storing product upside for ease of mixing when used and flip over several days before use
- Shelf Life: 1 year
 - o Lot numbers indicate date of manufacture are on the labels in YYYYMMDD format

Part B:

- Storage Temperature: 75° to 105°F (24° to 41°C)
- Moisture: Product must be kept free of moisture. Keep container closed because the product absorbs moisture from the air over time. Moisture in the product causes it to produce CO₂ gas which may cause pressure build-up inside a sealed container.
- Shelf Life: 1 year. Once opened, must be used right away.
 - o Lot numbers indicate date of manufacture are on the labels in YYYYMMDD format