

6180 MFUA-12 SERIES

POLYUREA TWO-COMPONENT PAVEMENT MARKING MATERIALS



PRODUCT DESCRIPTION

MFUA-12 is a 100% solids, two-component reflective Polyurea system designed for rapid-setting cone free application highway pavement marking. It provides excellent weathering durability, flexibility and abrasion resistance.

MFUA-12 system can be applied to Portland Cement Concrete (PCC) and asphalt surfaces as a highway long-lasting striping material for both edge and center line markings. MFUA-12 can also be used for streets, crosswalks, symbols, and legends.

MFUA-12 can be applied using the 2:1 mix ratio two-component traffic paint application equipment.

MFUA-12 is available in white, yellow and black and can be reflectorized with glass beads.

TECHNICAL DATA

| PROPERTY | TEST METHOD | SPECIFICATIONS |
|--|---------------------------------|-----------------------|
| Percent Solids | ASTM D1353 | 100% |
| No track time @ 77°F / 25°C, with glass beads | ASTM D711 | <5 minutes |
| Adhesion to concrete | ASTM D4541 | 100% concrete failure |
| Hardness (Shore D) | ASTM D2240 | >75 |
| Flexibility | ADTM D522 | ¼" |
| Abrasion resistance | ASTM D4060 | <60 mg weight loss |
| Tensile strength | ASTM D638 | >3,500 psi |
| Yellowness index | ASTM D1925 and ASTM E313 | <2 |
| Yellowness index after QUV exposure for 1000 h | QUV per ASTM G154 and ASTM E313 | <2 |

Color: Federal Standard 595B

White: 17925 Yellow: 13538

- **Part A:** 6180 MFUA-10 White, 6186 MFUA-10 Yellow, 6187 MFUA-10 Black
- **Part B:** 6185 MFUA-10 Catalyst

ADVANTAGES

- 100% solids, 2:1 by volume mix ratio
- Low viscosity for smooth application
- Fast curing for less road coning
- Special chemistry for rapid set at a wide range of temperatures
- Outstanding long-term abrasion and corrosion resistance
- Excellent wet & dry night time reflectivity
- Excellent daytime visibility
- Excellent flexibility
- Excellent weatherability & ultraviolet light stability

- High reflective quantities
- Snow plow resistant

COVERAGE in linear feet per gallon

| PROPERTY | THICKNESS IN MILS | | |
|----------|-------------------|------|------|
| | 15 | 20 | 25 |
| 4" | 320' | 240' | 192' |
| 6" | 214' | 160' | 128' |
| 8" | 160' | 120' | 96' |

PACKAGING

- 55 gallon drum
- 250 gallon tote

HIGH SHEAR VISCOSITY CHART (the values are in centipoises (mPa-s))

| TEMPERATURE | CATALYST | WHITE | YELLOW |
|----------------|----------|-------|--------|
| 100 °F (38 °C) | 1017 | 806 | 828 |
| 105 °F (40 °C) | 858 | 664 | 685 |
| 110 °F (43 °C) | 729 | 551 | 573 |
| 115 °F (46 °C) | 615 | 461 | 484 |
| 120 °F (49 °C) | 523 | 388 | 411 |
| 125 °F (52 °C) | 449 | 331 | 354 |
| 130 °F (54 °C) | 387 | 286 | 309 |
| 135 °F (57 °C) | 335 | 248 | 269 |
| 140 °F (60 °C) | 290 | 218 | 238 |
| 145 °F (63 °C) | 252 | 192 | 211 |
| 150 °F (66 °C) | 221 | 171 | 189 |

INSTALLATION & SURFACE PREPARATION

▪ **Placement**

All technical data regarding material type, application rate, and the glass beads will be provided by a SWARCO Colorado Paint Company representative to the project engineer prior to starting work. All procedures must be followed exactly per manufacturer’s instructions.

▪ **Surface Preparation**

To assure maximum adhesion and properties, the surface shall be dry and clean. Tape a 12-inch square sheet of thin plastic to the road surface, being careful to seal all edges. After 15 minutes, examine the bottom of the sheet and the road surface. If more than a sparse amount of moisture is present, do not apply. Surface preparation shall include, but not be limited to, cleaning and removal of sealing and curing compounds.

All pavements and temporary paint markings shall be cleaned to be free of grease, oil, dirt, grass, loose gravel, loose or flaking paint, and other materials.

The pavement surface area to be prepared shall be wider than the MFUA-12 line to be applied, such that a prepared area shall be clean on all sides of the MFUA-12 after application. New asphalt, concrete, and seal-coated surfaces shall be in place for a minimum of two weeks prior to application and shall have all of the curing compound removed. To avoid interference with the MFUA-12 system, any existing marking shall be physically removed by any agency-approved method other than by the use of chemicals. All existing markings shall be at least 90% removed. MFUA-12 may be applied over temporary paint markings that are very well adhered to the substrate and are thinner than 8 mils (200 µm).

▪ **Final Surface Preparation**

Upon completion of the surface preparation, the pavement surface shall first be power broomed and vacuumed. An additional compressed air operation, separate from the compressed air guns on the striping applicator, shall be used to remove residue and debris resulting from the cleaning work. Compressed air shall be used during striping application.

▪ **Weather Conditions**

Application shall be done only during dry conditions. Ambient (air) and surface (road) temperatures shall be 30°F (-1°C) to 130°F (54°C) and maximum 80% Relative Humidity. Road surface shall be completely dry with no dew or frost. The pavement temperature and ambient temperature and weather conditions shall be determined and documented before the start of the application and at any other time deemed necessary by the manufacturer or the agency.

▪ **Equipment**

MFUA-12 shall be applied with equipment utilizing the impingement mix, solvent free, airless spray application system or standard mix tube application equipment. The equipment shall be designed to accurately control flow of the material at the spray tip. The equipment shall have pressure gauges for each proportioning pump. The equipment shall have a metering device to register the accumulated footage for each spray gun or a meter to determine actual volume used.

▪ **Operation**

Each vehicle shall be operated by a technician who is an expert in that particular equipment's operation and plural component systems application techniques. The equipment shall be very clean and in sound operating condition. All safety precautions and good industrial safety practices shall be followed. MFUA-12 contains polyisocyanate which will react with moisture.

SAFETY

Before working with this product, the user is required to read and understand the information provided in the Safety Data Sheets and to follow the safety precautions and good industrial hygiene practices. Designed for the use by trained professional personnel only. MFUA-12 contains hazardous materials, it must be handled with full precautions.

STORAGE

Product is moisture-sensitive. Keep containers tightly closed at all times. Store in a dark, dry, and cool place. Protect from freezing. The shelf life when stored appropriately in the original sealed container is one year from the

date of manufacture. MFUA-12 contains polyisocyanate. Nitrogen blanket may be needed for previously opened container of 6185 Catalyst.

WARRANTY

SWARCO Colorado Paint, LLC warrants to the purchaser that this product shall be manufactured without defects when applied according to SWARCO Colorado Paint Application Instructions. This warranty covers material replacement only. Excluded from coverage is labor, any damage to the application surface or any failure of the coating caused other than by defects within the material. Because the conditions of use are beyond our control, SWARCO Colorado Paint shall not be liable for any injury, loss or damage, direct or consequential, arising from the use or the inability to use the product herein.

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy and completeness thereof is not guaranteed. Data is subject to alteration due to technical advances.

Above information not to be taken as a warranty or representation for which we assume legal responsibility. It is offered solely for consideration, investigation and verification.

If you have any questions about proper application techniques or other technical support issues, please contact your SWARCO sales or customer service representative.

Rev. 11/24