



The Chemical Company

## **SECTION 2790 – SYNTHETIC SURFACING AND LINE MARKINGS FOR CONIPUR SW**

### ***PART 1 – GENERAL***

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions as previously specified, apply to this section.

#### **1.2 SUMMARY**

- A. The contractor shall furnish all materials, labor, tools, and equipment necessary for the installation of the synthetic track surface and line markings on all areas detailed in the contract drawings.
- B. Related Sections include the following:
  - 1. "Storm Drainage" for track and field drainage system
  - 2. "Hot-Mix Asphalt Paving" base for track surface
  - 3. "Aggregate" base for asphalt
  - 4. "Portland Cement" work for curbs and related areas

#### **1.3 CODES AND STANDARDS**

- A. Codes and standards follow the current guidelines set forth by the National Federation of State High School Associations (NFHS), the National Collegiate Athletic Association (NCAA) and the International Association of Athletics Federations (IAAF). The NFHS rules shall be enforced where differences between the three associations are noted.

#### **1.4 SUBMITTALS**

- A. Submit three (3) sets of manufacturer's product data sheets including installation guidelines and maintenance instructions.
- B. Submit three (3) representative track samples in the color of surfacing to be installed.
- C. Submit test reports that verify the manufacturer's specifications (data) for the product to be installed.
- D. Submit documentation that verifies that the synthetic surfacing material does not contain any toxic or hazardous substance, which exceeds limits set forth by the EPA.
- E. Submit Material Safety Data Sheets (MSDS) for all individual components of the product being installed.
- F. Provide a letter stating that the surfacing contractor has reviewed the asphalt specification and accepts the specification as correct. Furthermore, the surfacing contractor shall provide a letter after checking the asphalt accepting it for synthetic surface installation. Should areas be found that do not meet specifications, they shall be repaired or replaced by the asphalt contractor prior to the synthetic surfacing contractor issuing its letter of acceptance.
- G. The synthetic surfacing material manufacturer shall submit a letter stating that the surfacing contractor is qualified to install its synthetic surface system.
- H. Submit three (3) copies of a detailed drawing showing location and color of all lane lines, start, finishes and all related markings for the owner to review at least four weeks prior to their application.



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- I. Submit evidence that the synthetic surfacing contractor holds the necessary contractor's license to install synthetic surfacing

1.5 WARRANTY

- A. Provide a Five (5) Year Warranty against faulty workmanship and materials for the synthetic surface. The warranty period shall commence at final completion of the surfacing.
- B. A one (1) Year Warranty shall be provided for the line markings.

1.6 QUALITY ASSURANCE

- A. Provide a certificate of accuracy from a registered engineer or land surveyor that the track measures 400 meters in all lanes from start to finish.
- B. Provide, as a part of the Warranty, documents stating that the materials applied conform to the manufacturer's specifications and that the material will not separate from the asphalt or concrete base, blister, bubble, fade, crack or wear excessively during the life of the warranty.
- C. The materials will not foam, thus causing air bubbles and reduce the life expectancy of the surface.
- D. The synthetic surfacing contractor and owner will annually walk and inspect the synthetic surface during the life of the warranty. Warranty issues will be repaired and for non-warranty items a method for correction will be presented.
- E. The synthetic surfacing contractor shall maintain a clean and orderly job site. All excess materials shall be removed from the construction area and properly disposed of. Scrap shall be removed in the same manner.

**PART 2 - PRODUCTS**

2.1 SYNTHETIC SURFACING

- A. The synthetic surfacing shall be a 13 mm thick, impermeable, sandwich system, with a paved in place rubber granule and polyurethane binder base layer sealed to render it impermeable. The surface finish is granular EPDM.

2.2 PREQUALIFIED PRODUCT

- A. BASF/CONICA, Conipur SW

Contact: David Painter 1-800-642-7010  
e-mail: dave.painter@partners.basf.com

- B. Prequalified Equal

2.3 PROPERTIES \*

PHYSICAL PROPERTY      REQUIREMENT

Water permeability	impermeable	
Relative abrasion resistance		DIN 18035/6 1.30
Spike resistance		DIN 18035/6 Class 1
Max. indentation when loaded		DIN 18035/6 5.70 mm
Remaining indentation	DIN 18035/6 0.45 mm	
Ball rebound		DIN 18035/6 99 %
Sliding coefficient – dry/leather		DIN 18035/6 0.70 Wet/leather
		DIN 18035/6 0.63
Standard deformation – 0°C		DIN 18035/6 0.7 mm
	20°C	DIN 18035/6 1.0 mm
	40°C	DIN 18035/6 1.1 mm







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- C. All areas to receive synthetic surfacing are to be clean and free of any loose particles or foreign substances such as dirt, oil, grease, etc.

### 3.2 INSTALLATION OF CONIPUR SW SURFACING

- A. Primer - All asphalt and concrete is primed using either a mixture of Conipur 322 polyurethane binder and solvent such as butyl acetate (1:1 w/w), for the asphalt or special Conipur 74 for concrete work. Application rate is approximately 0.28 lbs/sy. Only the area to be covered within the working day should be primed to ensure a good bond to the base.
- B. Base Layer – The base layer is a mixture of 1-3 mm SBR black rubber granules mixed in a mechanical mixer with Conipur 322 polyurethane binder. The materials are mixed until homogeneous. Mixing ratio is 100 parts rubber to 20 parts polyurethane. The prepared rubber and polyurethane is then paved in place using a heated mechanical screed paver, specially designed for this work, to an approximate depth of 10 mm using approximately 15 to 16.5 lbs/sy of mixed material.
- C. Seal Coat – The base layer is sealed by scraping a thixotropic mixture of Conipur 203 coating and EPDM rubber dust onto the surface to render it impermeable. The sealed surface must be checked for pin holes prior to further application. The seal coat consumption is approximately 2.6 lbs/sy of double mixed Conipur 203 and a small amount of EPDM rubber dust to adjust for temperature and humidity changes during the work day. Conipur 210 and EPDM rubber dust may be used as an alternative. The total mix applied will be slightly higher as Conipur 210 is not thixotropic.
- D. Top Layer – One application of double mixed Conipur 210 polyurethane coating at approximately 4.6 - 6.4 lbs/sy is applied on top of the base layer with a notched squeegee. After the material has self leveled and is still liquid, colored 1-3 mm EPDM rubber granules are broadcast into the surface to excess. After curing (hardening) the excess colored EPDM granules are removed. Then approximately 5.0 lbs/sy of EPDM will remain in the colored polyurethane. For a 13 mm system, approximately 15.6 - 16.5 lbs/sy of polyurethane coating will have been applied.
- E. All methods for mixing of products are to be approved by CONICA and can be found on their Technical Data Sheet (TDS)
- F. All labor shall be full time employees of the surfacing contractor.

### 3.3 LINE MARKINGS

- A. All line marking paint is to be approved by the synthetic surfacing manufacturer.
- B. All markings will be in accordance to the desires of the owner. See 1.3.A.

### 3.4 SPECIFIC SLOPES

- A. Concrete curbs - All top elevations of any continuous concrete curbs shall be a constant elevation.
- B. Track oval – running direction 0.1 %; lateral slope 2.0 % max. NFHS, 1% NCAA and IAAF.
- C. D areas (high jump) – towards cross bar 1 % downward
- D. Run ups same as oval unless located in the “D”.

END OF SECTION 02790