REQUEST FOR PROPOSAL (RFP)

FOR THE

**“REPAIR OF OUTDOOR TENNIS COURTS**

**AT**

**NATIONAL TENNIS CENTRE,**

**TACARIGUA”**



**Volume II – Technical Specifications**

**CEP/48252**

**SPORTT Ref: PR # PDA 00003**

### Rev. 00 19 November 2021

**(F 05-20-01-R4)**

REQUEST FOR PROPOSAL (RFP)

FOR

**“REPAIR OF OUTDOOR TENNIS COURTS AT**

**NATIONAL TENNIS CENTRE,**

**TACARIGUA”**

**Volume II: Technical Specifications**

### Rev 00

**Submitted By: Mr. Kern Subar**

**Approved By: H. Harnarine Maharaj**



**P.O. Box 3065, St. James**

**97 Tragarete Road, Woodbrook,**

**Port of Spain, Trinidad, W.I.**

***Main Office***

**TEL: (868) 622-7017/5603/4494**

**FAX: (868) 628-4954**

***Project Office***

**TEL: (868) 622- 0369**

**Email: cep@cepltd.com**

**Website: www.cepltd.com**

### Table of Contents

[DIVISION 01 GENERAL REQUIREMENTS 4](#_Toc50971)

[SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS 5](#_Toc50972)

[SECTION 01 4000 QUALITY REQUIREMENTS 11](#_Toc50973)

[SECTION 01 5000 TEMPORARY FACILITIES AND CONTROLS 16](#_Toc50974)

[SECTION 01 5100 TEMPORARY UTILITIES 19](#_Toc50975)

[SECTION 01 5213 FIELD OFFICES AND SHEDS 20](#_Toc50976)

[SECTION 01 7800 CLOSEOUT SUBMITTALS 23](#_Toc50977)

[PRODUCT SPECIFICATIONS 26](#_Toc50978)

# Division 01 – General Requirements

 **DIVISION 01**

 **GENERAL**

###  REQUIREMENTS

## SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

#####  PART 1 GENERAL

SECTION INCLUDES

1. Electronic document submittal service.
2. Preconstruction meeting.
3. Site mobilization meeting.
4. Progress meetings.
5. Construction progress schedule.
6. Progress photographs.
7. Coordination drawings.
8. Submittals for review, information, and project closeout.
9. Number of copies of submittals.
10. Submittal procedures.

RELATED REQUIREMENTS

PROJECT COORDINATION

1. Project Coordinator: Construction Manager/Project Manager

1. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.



1. During construction, coordinate use of site and facilities through the Project Coordinator.

1. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.



1. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

1. Coordinate field engineering and layout work under instructions of the Project Coordinator.

1. Make the following types of submittals to Engineer through the Project Coordinator:
	1. Requests for interpretation.
	2. Requests for substitution.
	3. Shop drawings, product data, and samples.
	4. Test and inspection reports.
	5. Design data.
	6. Manufacturer's instructions and field reports.
	7. Applications for payment and change order requests.
	8. Progress schedules.
	9. Coordination drawings.
	10. Closeout submittals.

 **PART 2 PRODUCTS - NOT USED**

 **PART 3 EXECUTION**

#####  3.01 ELECTRONIC DOCUMENT SUBMITTALS

1. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and transmitted via an Internet-based submittal service, or another approved method based on procedures established for intra-project communications.
	1. Besides submittals for review, information, and closeout, this procedure applies to requests for information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, and any other document any participant wishes to make part of the project record.

* 1. It is the Contractor's responsibility to submit documents to the Engineer/Project Coordinator.
	2. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.

1. Project Closeout: The Project Coordinator will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

#####  3.02 PRECONSTRUCTION MEETING

1. Project Manager/Engineer will schedule a meeting after Notice of Award.

1. Attendance Required:
	1. Owner.
	2. Engineer.
	3. Contractor.

1. Agenda:
	1. Execution of Owner-Contractor Agreement.
	2. Submission of executed bonds and insurance certificates.
	3. Distribution of Contract Documents.
	4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.

* 1. Designation of personnel representing the parties to Contract.
	2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
	3. Scheduling.

1. Project Manager/Engineer will record minutes and distribute copies within two days after meeting to participants to all the members of the project team, and those affected by decisions made.

#####  3.03 SITE MOBILIZATION MEETING

1. Project Manager/Engineer will schedule a meeting at the Project site prior to Contractor occupancy.

1. Attendance Required:
	1. Contractor.
	2. Owner.
	3. Special Consultants.
	4. Contractor's Superintendent.
	5. Major Subcontractors.

1. Agenda:
	1. Use of premises by Contractor.
	2. Owner's requirements and occupancy prior to completion.
	3. Construction facilities and controls.
	4. Temporary utilities.
	5. Survey and building layout.
	6. Security and housekeeping procedures.
	7. Schedules.
	8. Application for payment procedures.
	9. Procedures for testing.
	10. Procedures for maintaining record documents.
	11. Requirements for start-up of equipment.
	12. Inspection and acceptance of equipment put into service during construction period.

1. The Project coordinator will record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Owner, participan~~t~~s, and those affected by decisions made.



#####  3.04 PROGRESS MEETINGS

1. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

1. The Project Coordinator shall make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.

1. Attendance Required: Contractor’s Project Manager, major Subcontractors and suppliers, Engineer, as appropriate to agenda topics for each meeting.

1. Agenda:
	1. Review minutes of previous meetings.
	2. Review of Work progress.
	3. Field observations, problems, and decisions.
	4. Identification of problems that impede, or will impede, planned progress.
	5. Review of submittals schedule and status of submittals.
	6. Review of off-site fabrication and delivery schedules.
	7. Maintenance of progress schedule.
	8. Corrective measures to regain projected schedules.
	9. Planned progress during succeeding work period.
	10. Maintenance of quality and work standards.
	11. Effect of proposed changes on progress schedule and coordination.
	12. Other business relating to Work.

1. The Project Coordinator shall record minutes and distribute copies within two days after meeting to participants, to project team members, owners and those affected by decisions made.

#####  3.05 CONSTRUCTION PROGRESS SCHEDULE

1. If preliminary schedule requires revision after review, submit revised schedule in a timeframe as specified in the Contract documents/Project Schedule.

1. After review of preliminary schedule, submit draft of proposed complete schedule for review within a timeframe as specified in the Contract documents/Project Schedule.

1. Include written certification that major contractors have reviewed and accepted proposed schedule.

1. In a timeframe as specified in the Contract documents/Project Schedule. after joint review, submit complete schedule.



1. Submit updated schedule with each Application for Payment.

#####  3.06 PROGRESS PHOTOGRAPHS

1. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.

1. Maintain one set of all photographs at project site for reference; same copies as submitted identified as such.

1. Photography Type: Digital; electronic files.

1. In addition to periodic, recurring views, take photographs of each of the following events:
	1. Completion of site clearing.
	2. Excavations in progress.
	3. Foundations in progress and upon completion.
	4. Structural framing in progress and upon completion.
	5. Enclosure of building, upon completion.

1. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
	1. Delivery Medium: To be determined by intra-communications procedures set up for the project.
	2. File Naming: Include project identification, date and time of view, and view identification.

#####  3.07 COORDINATION DRAWINGS

1. Provide information required by Project Manager/Engineer/Project Coordinator for preparation of coordination drawings.

1. Review drawings prior to submission to Project Manager/Engineer.

#####  3.08 SUBMITTALS FOR REVIEW

1. When the following are specified in individual sections, submit them for review:
	1. Product data.
	2. Shop drawings.
	3. Samples for selection.
	4. Samples for verification.

1. Submit to Project Manager/Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C.

**3.09**

A.

* 1. Design data.

After review, provide copies and distribute in accordance with

SUBMITTAL

PROCEDURES article below and for record documents purposes described in Section 01

7800 -

 CLOSEOUT SUBMITTALS.

**SUBMITTALS FOR INFORMATION**

When the following are specified in individual sections, submit them for information:

Inspection reports.

Manufacturer's instructions.

Manufacturer's field reports.

Other types indicated.

Submit for Project Manager/Engineer knowledge as contract administrator.

**SUBMITTALS FOR PROJECT CLOSEOUT**

When the following are specified in individual sections, submit them at project closeout:

Project record documents.

Operation and maintenance data.

Other types as indicated.

* 1. Certificates.
	2. Test reports.
	3. 5. 6. 7.

B.

**3.10**

A.

1.

2.

* 1. Warranties.
	2. Bonds.

5.

 B. Submit for Owner's benefit during and after project completion.

#####  3.11 NUMBER OF COPIES OF SUBMITTALS

1. Documents for Review:
	1. Small Size Sheets, Not Larger than 8-1/2 x 11 inches (215 x 280 mm): Submit the number of copies that Engineer requires, plus one copy that will be retained by Project Manager.
	2. Larger Sheets, Not Larger than 36 x 48 inches (910 x 1220 mm): Submit two copies.

1. Documents for Information: Submit one copy.

1. Extra Copies at Project Closeout: See Section 01 7800.

1. Samples: Submit the number specified in individual specification sections; one of which

will be retained by Engineer.

1. After review, produce duplicates.
2. Retained samples will not be returned to Contractor unless specifically so stated.

#####  3.12 SUBMITTAL PROCEDURES

1. Transmit each submittal with approved form.

1. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

1. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

1. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.



1. Schedule submittals to expedite the Project, and coordinate submission of related items.

1. For each submittal for review, allow 15 days excluding delivery time to and from the Engineer.

1. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

1. Provide space for Engineer review stamps.

1. When revised for resubmission, identify all changes made since previous submission.

1. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

**END OF SECTION**

## SECTION 01 4000 QUALITY REQUIREMENTS

 **PART 1 GENERAL**

#####  1.01 SECTION INCLUDES

1. References and standards.
2. Quality assurance submittals
3. Control of installation.
4. Tolerances.
5. Testing and inspection services.

 **1.02 RELATED REQUIREMENTS**

 A. Section: Submittal procedures.

#####  1.03 REFERENCE STANDARDS

1. ASTM C 1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.

1. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2007a.

1. ASTM C 1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2007.

1. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2004a.

1. ASTM E 329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2007a.

1. ASTM E 543 - Standard Specification for Agencies Performing Nondestructive Testing; 2008.

#####  1.04 SUBMITTALS

1. Testing Agency Qualifications:
	1. Prior to start of Work; submit agency name, address, and telephone number, and names of testing agency, specialist and responsible officer.

1. Design Data: Submit for the Engineer’s knowledge for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1. Test Reports: After each test/inspection, promptly submit two copies of report to the Engineer and to.
	1. Include:
		1. Date issued.
		2. Project title and number.
		3. Name of inspector.
		4. Date and time of sampling or inspection.
		5. Identification of product and specifications section.
		6. Location in the Project.
		7. Type of test/inspection.
		8. Date of test/inspection.
		9. Results of test/inspection.
		10. Conformance with Contract Documents.
		11. When requested by C.E.P. Limited, provide interpretation of results.

2. Test report submittals are for C.E.P. Limited's knowledge for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1. Certificates: When specified in individual specification sections, submit certification by the manufacturer and or installation/application subcontractor to CEP Limited, in quantities specified for Product Data.
	* 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
		2. Certificates may be recent or previous test results on material or product, but must be acceptable to the Engineer.

1. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1. Manufacturer's Field Reports: Submit reports for C.E.P. Limited's benefit or for The

Client.

* + 1. Submit report in duplicate within 7 days of observation to C.E.P. Limited for information.
		2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1. Erection Drawings: Submit drawings for C.E.P. Limited's benefit.
	* 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
		2. Data indicating inappropriate or unacceptable Work will be subject to action by CEP Limited.

1. Quality Management Manual: The contractor shall prepare and make available a Quality Management Manual for the Engineer’s review and approval. This manual should be based on the quality requirements set out in this specification document

#####  1.05 REFERENCES AND STANDARDS

1. For products and workmanship specified by reference to a document or documents not included in the Specification, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

1. Where reference standards contained in any sections of this document are found to be obsolete, conform to the most updated versions of these reference standards.

1. Obtain copies of standards where required by product specification sections.

1. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

1. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.

1. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract nor those of C.E.P. Limited shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

#####  1.06 TESTING AND INSPECTION AGENCIES

1. The Contractor will employ services of an independent testing agency to perform certain specified testing; which is to be paid for by the contractor.

1. The Client will employ and pay for services of an independent testing agency to perform other specified testing.

1. Employment of agency in no way relieves of obligation to perform Work in accordance with requirements of Contract Documents.

1. Employed Agency:
	1. Testing agency: Comply with requirements of ASTM E 329, ASTM E 543, ASTM C 1021, ASTM C 1077, and ASTM C 1093.
	2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
	3. Laboratory: Authorized to operate in Trinidad & Tobago.

 **PART 2 EXECUTION**

#####  2.01 CONTROL OF INSTALLATION

1. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce Work of specified quality.

1. Comply with manufacturers' instructions, including each step in sequence.

1. Should manufacturers’ instructions conflict with Contract Documents, request clarification from the Engineer before proceeding.

1. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1. Have Work performed by persons qualified to produce required and specified quality.

1. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

1. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

#####  2.02 TOLERANCES

1. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

1. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from the Engineer before proceeding.

1. Adjust products to appropriate dimensions; position before securing products in place.

#####  2.03 TESTING AND INSPECTION

1. See individual specification sections for testing required.

1. Testing Agency Duties:
	1. Test samples of mixes submitted by The Contractor.
	2. Provide qualified personnel at site. Cooperate with C.E.P. Limited and in performance of services.
	3. Perform specified sampling and testing of products in accordance with specified standards.
	4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
	5. Promptly notify C.E.P. Limited and the Project Manager of observed irregularities or non-conformance of Work or products.
	6. Perform additional tests and inspections required by C.E.P. Limited.
	7. Submit reports of all tests/inspections specified.

1. Limits on Testing/Inspection Agency Authority:
	1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
	2. Agency may not approve or accept any portion of the Work.
	3. Agency may not assume any duties of The Contractor.
	4. Agency has no authority to stop the Work.

1. Responsibilities of the Contractor:
	1. No approval or acceptance shall in any way relieve the Contractor of his responsibility for the quality of materials and the standard of workmanship in the finished works, and for the strength, durability and appearance of the finished works.
	2. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
	3. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
	4. Notify C.E.P. Limited and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
	5. Employ services of an independent qualified testing laboratory for additional samples, tests, and inspections required by beyond specified requirements.
	6. Arrange with The Project Manager to obtain payment for additional samples, tests, and inspections required beyond specified requirements.

1. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by the Engineer.

1. Re-testing required because of non-conformance to specified requirements shall be paid for by the Contractor.

#####  2.04 DEFECT ASSESSMENT

1. Replace Work or portions of the Work not conforming to specified requirements at no additional cost.

1. If, in the opinion of C.E.P. Limited, it is not practical to remove and replace the Work, the Engineer will direct the contractor to recommend an appropriate remedy or recommend an adjustment in payment.

**END OF SECTION**

## SECTION 01 5000 TEMPORARY FACILITIES AND CONTROLS

**PART 1 GENERAL**

##### 1.01 SECTION INCLUDES

1. Temporary utilities.
2. Temporary telecommunications services.
3. Temporary sanitary facilities.
4. Temporary Controls: Barriers, enclosures, and fencing.
5. Security requirements.
6. Vehicular access and parking.
7. Waste removal facilities and services.
8. Project identification sign.
9. Field offices.

##### 1.02 RELATED REQUIREMENTS

1. Section 01 5100 - Temporary Utilities.
2. Section 01 5213 - Field Offices and Sheds.

##### 1.03 TEMPORARY UTILITIES - See Section 01 5100

1. The Contractor will provide the following:

1. Electrical power and metering, consisting of connection to existing facilities. 2. Water supply, consisting of connection to existing facilities

1. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

1. Existing facilities may not be used.

1. New permanent facilities may be used.

1. Use trigger-operated nozzles for water hoses, to avoid waste of water.

**1.04 TELECOMMUNICATIONS SERVICES**

A. Provide equivalent equipment and connections for The Engineer’s field office.

##### 1.05 TEMPORARY SANITARY FACILITIES

1. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
2. Maintain daily in clean and sanitary condition.

##### 1.06 BARRIERS

1. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

1. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

##### 1.07 FENCING

1. Construction: Contractor's option.

1. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

##### 1.08 EXTERIOR ENCLOSURES

A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

##### 1.09 INTERIOR ENCLOSURES

1. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owneroccupied areas, and to prevent damage to existing materials and equipment.

1. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

##### 1.10 SECURITY

A. Provide security and facilities to protect Work, and existing facilities, from unauthorized entry, vandalism, or theft.

##### 1.11 VEHICULAR ACCESS AND PARKING

1. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

1. Coordinate access and haul routes with governing authorities and Owner.

1. Provide and maintain access to fire hydrants, free of obstructions.

1. Provide means of removing mud from vehicle wheels before entering streets.

1. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

##### 1.12 WASTE REMOVAL

1. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

1. Provide containers with lids. Remove trash from site periodically.

1. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

##### 1.13 PROJECT IDENTIFICATION

1. Provide project identification sign of design and construction indicated on Drawings.

1. Erect on site at location indicated.

1. No other signs are allowed without Owner permission except those required by law.

##### 1.14 FIELD OFFICES - See Section 01 5213

1. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.

1. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

1. Provide separate private office similarly equipped and furnished, for use of The Engineer.

1. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

##### 1.15 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

1. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.

1. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.

1. Clean and repair damage caused by installation or use of temporary work.

1. Restore new permanent facilities used during construction to specified condition.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

*Section 01 5100 Temporary Utilities*

## SECTION 01 5100 TEMPORARY UTILITIES

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

A. Temporary Utilities: Electricity, lighting, heat, ventilation, and water.

##### 1.02 RELATED REQUIREMENTS

A. Section 01 5000 - Temporary Facilities and Controls:

1. Temporary telecommunications services for administrative purposes.
2. Temporary sanitary facilities required by law.

##### 1.03 TEMPORARY ELECTRICITY

1. Cost: By Contractor.
2. Provide power service required from utility source.
3. Power Service Characteristics: volt to be determined, ampere to be determined, three phase, four wire.
4. Provide power outlets for construction operations, with branch wiring and distribution boxes located at each floor. Provide flexible power cords as required.
5. Provide main service disconnect and over-current protection at convenient location and meter.
6. Permanent convenience receptacles may be utilized during construction.
7. Provide adequate distribution equipment, wiring, and outlets to provide single phase branch circuits for power and lighting.

##### 1.04 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

1. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft (21 watt/sq m).
2. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
3. Maintain lighting and provide routine repairs.

**1.05 TEMPORARY VENTILATION**

##### 1.06 TEMPORARY WATER SERVICE

1. Cost of Water Used: By Contractor.
2. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
3. Connect to existing water source.

1. Exercise measures to conserve water.

**PART 2 PRODUCTS - NOT USED PART 3 EXECUTION - NOT USED END OF SECTION**

## SECTION 01 5213 FIELD OFFICES AND SHEDS

**PART 1 GENERAL**

##### 1.01 SECTION INCLUDES

1. Temporary field offices for use of The Engineer.
2. Temporary field offices for use of The Contractor.
3. Maintenance and removal.

##### 1.02 RELATED REQUIREMENTS

1. Section 01 5000 - Temporary Facilities and Controls:
	* 1. Temporary telecommunications services for administrative purposes.
		2. Temporary sanitary facilities required by law.

1. Section 01 5000 - Temporary Facilities and Controls: Parking and access to field offices.

**1.03 USE OF EXISTING FACILITIES**

A. Designated existing spaces may be used for field offices.

##### 1.04 USE OF PERMANENT FACILITIES

A. When permanent facilities are enclosed with operable utilities, relocate offices into building, with written agreement of Owner, and remove temporary buildings.

**PART 2 PRODUCTS**

##### 2.01 MATERIALS, EQUIPMENT, FURNISHINGS

A. Materials, Equipment, Furnishings: Serviceable, new or used, adequate for required purpose.

##### 2.02 CONSTRUCTION

1. Portable or mobile buildings, or buildings constructed with floors raised above ground, securely fixed to foundations, with steps and landings at entrance doors.
2. Construction: Structurally sound, secure, weather tight enclosures for office. Maintain during progress of Work; remove when no longer needed.
3. Temperature Transmission Resistance of Floors, Walls, and Ceilings: Compatible with occupancy requirements.
4. Exterior Materials: Weather resistant, finished in one color.
5. Interior Materials in Offices: Sheet type materials for walls and ceilings, prefinished or painted; resilient floors and bases.
6. Fire Extinguishers: Appropriate type fire extinguisher at each office.

**2.03 ENVIRONMENTAL CONTROL**

A. Heating, Cooling, and Ventilating: Automatic equipment to maintain comfort conditions.

##### 2.04 Contractor OFFICE AND FACILITIES

1. Size: For Contractor's needs and to provide space for project meetings.
2. Telephone: As specified in Section 01 5000.

1. Furnishings in Meeting Area: Conference table and chairs to seat at least eight persons; racks and files for Contract Documents, submittals, and project record documents. D. Other Furnishings: Contractor's option.

E. Equipment: Six adjustable band protective helmets for visitors, one 10 inch (250 mm) outdoor weather thermometer.

##### 2.05 OWNER AND ENGINEER OFFICE (NOT REQUIRED)

1. Separate space for sole use of Owner and Engineer, with separate entrance door with new lock and two keys.
2. Area: Minimum 150 sq ft (14 sq m), minimum dimension 8 ft (2.4 m).
3. Windows: Minimum three minimum total area of 10 percent of floor area, with operable sash and insect screens. Locate to provide views of construction area. D. Telephone: As specified in Section 01 5000.
4. Sanitary Facilities: As specified in Section 01 5000.
5. Furnishings:
	* 1. One desk 54 x 30 inch (1.4 x 0.75 m), with three drawers.
		2. One drafting table 36 x 72 inch (one x 1.8 m), with one equipment drawer and a full width parallel straight edge.
		3. One metal, double-door storage cabinet under table.
		4. Plan rack to hold working Drawings, shop drawings, and record documents.
		5. One standard four-drawer legal size metal filling cabinet with locks and two keys per lock.
		6. Six linear ft (2 m) of metal bookshelves.
		7. Two swivel arm chairs.
		8. Two straight chairs.
		9. One drafting table stool.
		10. One tackboard 36 x 30 inch (1 x 0.75 m).
		11. One waste basket per desk and table.

**PART 3 EXECUTION**

**3.01 PREPARATION**

A. Fill and grade sites for temporary structures to provide drainage away from buildings.

##### 3.02 INSTALLATION

1. Install office spaces ready for occupancy 15 days after date fixed in Notice to Proceed.
2. Parking: Two hard surfaced parking spaces for use by Owner and Engineer, connected to office by hard surfaced walk.
3. Employee Residential Occupancy: Not allowed on Owner's property.

##### 3.03 MAINTENANCE AND CLEANING

1. Weekly janitorial services for offices; periodic cleaning and maintenance for offices.
2. Maintain approach walks free of mud, water, and snow.

##### 3.04 REMOVAL

A. At completion of Work remove buildings, foundations, utility services, and debris. Restore areas.

**END OF SECTION**

## SECTION 01 7800 CLOSEOUT SUBMITTALS

**PART 1 GENERAL**

##### 1.01 SECTION INCLUDES

1. Project Record Documents.
2. Operation and Maintenance Data.
3. Warranties and bonds.

##### 1.02 RELATED REQUIREMENTS

1. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
2. Individual Product Sections: Specific requirements for operation and maintenance data.
3. Individual Product Sections: Warranties required for specific products or Work.

##### 1.03 SUBMITTALS

1. Project Record Documents: Submit documents to Project Manager/ Engineer with claim for final Application for Payment.
2. Operation and Maintenance Data:
	1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Project Manager/ Engineer will review draft and return one copy with comments.
	2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
	3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with comments. Revise content of all document sets as required prior to final submission.
	4. Submit two sets of revised final documents in final form within 10 days after final inspection.
3. Warranties and Bonds:
	1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
	2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
	3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

##### 3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.

# Specifications.

1. Addenda.
2. Change Orders and other modifications to the Contract.
3. Reviewed shop drawings, product data, and samples.
4. Manufacturer's instruction for assembly, installation, and adjusting.
5. Ensure entries are complete and accurate, enabling future reference by Owner.
6. Store record documents separate from documents used for construction.
7. Record information concurrent with construction progress.
8. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
	1. Manufacturer's name and product model and number.
	2. Product substitutions or alternates utilized.
	3. Changes made by Addenda and modifications.
9. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
	1. Measured depths of foundations in relation to finish first floor datum.
	2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
	3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
	4. Field changes of dimension and detail.
	5. Details not on original Contract drawings.

##### 3.02 OPERATION AND MAINTENANCE DATA

1. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
2. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
3. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

##### 3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

1. For Each Product, Applied Material, and Finish:
2. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
4. Additional information as specified in individual product specification sections.

**3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS** A. For Each Item of Equipment and Each System:

* + 1. Description of unit or system, and component parts.
		2. Identify function, normal operating characteristics, and limiting conditions.
		3. Include performance curves, with engineering data and tests.
		4. Complete nomenclature and model number of replaceable parts.
1. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
2. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
3. Provide servicing and lubrication schedule, and list of lubricants required.
4. Include manufacturer's printed operation and maintenance instructions.
5. Include sequence of operation by controls manufacturer.
6. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
7. Additional Requirements: As specified in individual product specification sections.

##### 3.05 OPERATION AND MAINTENANCE MANUALS

1. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
2. Prepare data in the form of an instructional manual.

##### 3.06 WARRANTIES AND BONDS

1. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
2. Verify that documents are in proper form, contain full information, and are notarized.
3. Co-execute submittals when required.
4. Retain warranties and bonds until time specified for submittal.
5. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

##### END OF SECTION

CEP/48252: NATIONAL TENNIS CENTRE *Product Specifications*

REPAIR OF OUTDOOR TENNIS COURTS

SPORTT Tender ID PR # PDA 00003

**PRODUCT**

 **SPECIFICATIONS**

#### ACRYLIC PATCH BINDER CMT-6

A 100% acrylic liquid binder designed for on-site mixing with sand and cement. Ideal for leveling and repairing low spots and depressions up to 3/4” deep on tennis court and other sport surface pavements. Acrylic Patch Binder can also be used for filling cracks in asphalt or concrete sport surfaces up to 1” in width.

##### USES

Tennis courts or any other asphalt or concrete sport or recreational surface.

##### COLOR

Milky White.

|  |
| --- |
| **Chemical Characteristics** |
| Classification | Acrylic Emulsion |
| Weight per gallon @ 77° F | 8.8 ± .5 pounds |
| Flammability | Non-Flammable |
| Flash Point | None |
| Storage Life | Keep liquid from freezing |

##### SURFACE PREPARATION

Pavement surface must be cleaned entirely of dust, dirt, debris and all loose materials. New asphalt surfaces must cure 14-30 days prior to application. New concrete surfaces must cure 28 days prior to application. Concrete surfaces should have a medium broom finish or similar roughened texture. Etch surface with muriatic or phosphoric acid, rinse and allow to dry before application of successive coatings.

##### MIXING PROCEDURES

A power mixer (drill with mixing attachment or mortar mixer) is recommended. For patching and filling depressions, use the following mix design:

Acrylic Patch Binder ..............................1 gallon Sand .......................................................30 lbs.

Cement ...................................................5-7 lbs.

##### NOTE

Thoroughly mix dry sand and cement together first before adding to Acrylic Patch Binder.

##### APPLICATION

Apply patch mix with smooth sided screed or trowel. Be sure to feather edges on patches. Acrylic Patch Binder patching mix should be applied in multiple lifts to achieve desired depth in patches greater than 1/2”.

##### IMPORTANT

Mix thoroughly for only 2 to 4 minutes. DO NOT OVERMIX as this may cause excessive air entrainment and loss of strength. Surface and air temperatures must be above 50°F (10°C) during application and for at least 24 hours after application. Stir before using. Do not apply when rain is imminent or forecast. Keep from freezing. Close container when not in use.

##### DRYING TIME

Allow surface to harden completely before applying coatings or opening to foot or vehicle traffic.

##### COVERAGE

One gallon will produce enough patch mix (when mixed with sand and cement) to fill .86 square yard (approximately 7.75 square feet) at 1/4” depth. When used as a Crack Filler: One gallon will produce enough material to fill 75-150 lineal feet of crack, depending on depth and width of crack.

**CLEAN UP**

Wash tools in water before material dries.

##### CAUTIONS

Do not store in direct sunlight or where temperatures exceed 100°F. Do not apply if rain is imminent or forecast. Keep from freezing. Close container when not in use. Refer to product Safety Data Sheet (SDS) for additional safety information and precautions.

##### WARRANTY

The statements made on this technical bulletin are believed to be true and accurate, and are intended to provide a guide for approved construction practices. Manufacturer does not make, nor does it authorize any agent or representative to make any warranty, express or implied, concerning this material as workmanship, weather, construction, equipment utilized and other variables affecting results are all beyond our control. Manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. In no event shall Manufacturer be liable for any injury, loss or damage, either direct or incidental, special or consequential, however arising, in connection with material or equipment furnished or work performed. Manufacturer shall not, in any manner, be liable for any defects, variations or change in condition in the substructure over which its products are installed.

####  ACRYLIC PATCH BINDER CMT-6

**REVISED 12/19**

Copyright© 2019, SportMaster All rights reserved.

ThorWorks Industries, Inc.

P.O. Box 2277

Sandusky, OH 44870

Phone: 1-800-326-1994 FAX: 1-419-626-5477 www.sportmaster.net

####  ACRYLIC RESURFACER CMT-3

SportMaster Acrylic Resurfacer is a 100% acrylic emulsion resurfacer designed for on site mixing with silica sand. Acrylic Resurfacer reduces surface porosity allowing for application of an even, full depth color, playing surface. Retextures existing smooth playing surfaces to promote consistent application of successive coats.

##### USES

SportMaster Acrylic Resurfacer is applied to asphalt, concrete, and existing acrylic surfaces in preparation for SportMaster color finish systems.

##### COLOR

Available in Black and Neutral.

|  |
| --- |
| **Chemical Characteristics** |
|  | % Weight (minimum) |
| Acrylic Emulsion  | 44.0 |
| Hiding Pigment | 2.0 |
| Mineral Inert Fillers | 5.0 |
| Film Formers, Additives | .2 |
| Water | 45.0 |
|  | **Product Data** |  |
| Type |  | Acrylic Emulsion |
| Pounds per gallon at 77°F  |  | 8.5 ± .5 |
| % Non Volatile Material |  | 27.5 ± 5.0 |
| Odor |  | Slight Ammonia |
| Flammability |  | Non-Flammable |
| Flash Point |  | None |
| Storage Life  |  | One Year |

##### SURFACE PREPARATION

Pavement surface must be cleaned entirely of dust, dirt, debris and all loose materials. New asphalt must cure 1430 days before application. Repair of pavement surface defects, depressions and cracks must be completed prior to application. All repairs must be flush and smooth to adjoining surfaces.

##### MIXING PROCEDURES

* For Use As A Coating - Use the following mix design (based on 55 gallons of Acrylic Resurfacer for ease of calculation):

Acrylic Resurfacer ......................................55 gallons Silica Sand (50 - 60 mesh) .........................800 lbs.

Water ..........................................................33 gallons

* For Use As A Patching Material - Acrylic Resurfacer may be modified with the following mix design. Patching Mix for applications up to 1/4” lifts:

Acrylic Resurfacer ......................................10 gallons Water ..........................................................5 gallons Sand ............................................................200 lbs.

Cement .......................................................1/2 gallon

(Always mix cement thoroughly with a small amount of water before adding to patching mix).

##### NOTE

Silica Sand used in patching should be AFS fineness 30 to 60 mesh.

##### APPLICATION

Apply Acrylic Resurfacer with a soft rubber squeegee. Apply successive coats in cross directions. Scrape all rough spots and ridges before applying the next coat. Apply one or two coats, depending on surface porosity and condition. Two coats are recommended on new or uncoated asphalt.

##### IMPORTANT

Surface and air temperatures must be above 50°F (10°C) during application and for at least 24 hours after application. Stir before using. Do not apply when rain is imminent or forecast. Keep from freezing. Close container when not in use.

**DRYING TIME**

30 to 60 minutes under optimum drying conditions.

##### COVERAGE

Yield calculations are based on undiluted gallons of SportMaster Acrylic Resurfacer and will vary according to surface texture and porosity within the limits below:

.07 to .09 gallons per square yard per coat.

##### CAUTIONS

Do not store in direct sunlight or where temperatures exceed 100°F. Do not apply if rain is imminent or forecast. Keep from freezing. Close container when not in use. Refer to product Safety Data Sheet (SDS) for additional safety information and precautions.

##### WARRANTY

The statements made on this technical bulletin are believed to be true and accurate, and are intended to provide a guide for approved construction practices.

####  ACRYLIC RESURFACER CMT-3

**REVISED 12/19**

Manufacturer does not make, nor does it authorize any agent or representative to make any warranty, express or implied, concerning this material as workmanship, weather, construction, equipment utilized and other variables affecting results are all beyond our control. Manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. In no event shall Manufacturer be liable for any injury, loss or damage, either direct or incidental, special or consequential, however arising, in connection with material or equipment furnished or work performed. Manufacturer shall not, in any manner, be liable for any defects, variations or change in condition in the substructure over which its products are installed.

Copyright© 2019, SportMaster All rights reserved.

ThorWorks Industries, Inc.

P.O. Box 2277

Sandusky, OH 44870

Phone: 1-800-326-1994 FAX: 1-419-626-5477 www.sportmaster.net

####  CRACK MAGIC CMT-9

Crack Magic is a 100% acrylic elastomeric crack sealant designed for sealing cracks in asphalt and concrete pavement sport surfaces. It provides a protective barrier against moisture intrusion into pavement surfaces. Crack Magic is both economical and easy to use.

##### USES

Crack Magic is designed for filling cracks up to 1/2” wide in asphalt or concrete pavement. Ideal for use in concrete expansion joints.

##### COMPOSITION

Crack Magic is a 100% acrylic elastomeric crack sealant fortified with fibers and select mineral fillers.

**SIZES**

Crack Magic is available in one-gallon pails.

##### COLOR

Available in green, red, and neutral colors.

|  |
| --- |
| **Chemical & Physical Analysis** |
| Classification.  | 100% Acrylic Emulsion |
| Weight per gallon @ 77°F | Approx. 8.8 ± .5 lbs. |
| Color | Dark Gray to Black when dry |
| Non-Volatiles (%) | Approx. 61 ± 5% |
| Drying Time |  Dependant upon filler depth |
| Adhesion & Resistance to Water | Non Penetration or Loss of Adhesion |
| Resistant to Heat | No Blistering or Sagging |
| Flexibility | No Cracking or Flaking |
| Resistance to Impact. | No Chipping, Flaking, or Cracking |
| Effects of Accelerated Weathering | PASSES |

##### LIMITATIONS

Crack Magic shall not be applied when temperature is expected to drop below 50°F at any time within a 24 hour period immediately following application.

##### TECHNICAL DATA

Environmental Considerations: Crack Magic is a nonhazardous environmentally friendly waterbased crack sealant containing less than 50 grams per liter volatile organic content (VOC).

##### PHYSICAL/CHEMICAL PROPERTIES

Crack Magic meets the following material requirements when tested in accordance with ASTM C661, ASTM C719, ASTM C793, ASTM C794, ASTM D4758. (See chart).

##### INSTALLATION

Cracks must be cleaned of all dirt, debris, and vegetation prior to application of crack sealant.

##### METHODS

One Gallon Pails: Apply crack sealant with putty knife or trowel.

##### MIXING PROCEDURES

Crack Magic is a ready-to-use product. Do not dilute. Neutral Crack Magic can be tinted with ColorPlus pigment dispersion to achieve additional colors.

##### APPLICATION

Fill cracks completely with crack sealant. Smooth flush to adjoining pavement with putty knife or trowel. Feather edges for smooth transition to playing surface. Allow material to dry before opening to play or applying acrylic sport coatings.

##### IMPORTANT

Surface and air temperatures must be above 50°F (10°C) during application and for at least 24 hours after application. Stir before using. Do not apply when rain is imminent or forecast. Keep from freezing. Close container when not in use.

##### ESTIMATING MATERIAL REQUIREMENTS

Coverage is dependent upon depth and width of cracks. Typically, one gallon of Crack Magic will fill approximately 75-150 feet of cracks.

##### PRECAUTIONS

Both surface and ambient temperature shall be a minimum of 50°F. Temperature shall not drop below 50°F within a 24 hour period following application.

##### TECHNICAL SERVICES

Manufacturer: Complete product specifications, material safety data sheets, and technical assistance is available from the manufacturer.

**Professional Applicators:** Your local applicator is available to provide on-site inspections and recommendations to meet your specific needs.

##### CAUTIONS

Do not store in direct sunlight or where temperatures exceed 100°F. Do not apply if rain is imminent or

####  CRACK MAGIC CMT-9

**REVISED 12/19**

forecast. Keep from freezing. Close container when not in use. Refer to product Safety Data Sheet (SDS) for additional safety information and precautions.

##### WARRANTY

The statements made on this technical bulletin are believed to be true and accurate, and are intended to provide a guide for approved construction practices. Manufacturer does not make, nor does it authorize any agent or representative to make any warranty, express or implied, concerning this material as workmanship, weather, construction, equipment utilized and other variables affecting results are all beyond our control. Manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. In no event shall Manufacturer be liable for any injury, loss or damage, either direct or incidental, special or consequential, however arising, in connection with material or equipment furnished or work performed. Manufacturer shall not, in any manner, be liable for any defects, variations or change in condition in the substructure over which its products are installed.

Copyright© 2019, SportMaster All rights reserved.

ThorWorks Industries, Inc.

P.O. Box 2277

Sandusky, OH 44870

Phone: 1-800-326-1994 FAX: 1-419-626-5477 www.sportmaster.net

#### NEUTRAL CONCENTRATE CMT-38

SportMaster Neutral Concentrate is a 100% acrylic emulsion coating formulated for tennis courts and other sport and recreational pavement surfaces. Neutral Concentrate is designed to be mixed with SportMaster ColorPlus pigment dispersion to achieve desired color.

##### USES

Tennis courts, basketball courts, pickleball courts, and other multipurpose pavement surfaces.

##### COLOR

Neutral. Desired color is achieved by mixing ColorPlus pigment dispersion with Neutral Concentrate.

|  |
| --- |
| **Product Data** |
| Type | Acrylic Emulsion |
| Pounds per Gallon | .8.8 ± .5 |
| Odor | Slight Ammonia |
| Flammability | Non-Flammable |
| Flash Point | None |

##### SURFACE PREPARATION

Pavement surface must be cleaned entirely of dust, dirt, and debris. Repair of pavement surface defects, depressions and cracks must be completed prior to application. All repairs must be flush and smooth to adjoining surfaces.

New asphalt surfaces must cure 14-30 days prior to application. It is recommended that any uncoated asphalt surface receive one or more coats of Acrylic Resurfacer (Technical Bulletin CMT - 3) as required by surface roughness and porosity to provide a smooth, dense underlayment for application of color coatings.

New concrete surfaces must cure 28 days prior to application. Concrete surfaces should have a medium broom finish or similar roughened texture. Etch surface with muriatic or phosphoric acid and apply SportMaster Acrylic Adhesion Promoter (Technical Bulletin CMT - 21).

##### MIXING PROCEDURES

Mix in the following order for 55 gallon drum of Neutral Concentrate:

Neutral Concentrate .............................55 gallons

ColorPlus ................................................4 gallons

Water .....................................................28-33 gallons

Silica sand ..............................................400 pounds

(70 to 90 mesh AFS)

**REVISED 12/19**

Mix in the following order for 30 gallon keg of Neutral Concentrate:

Neutral Concentrate .............................30 gallons

ColorPlus ................................................2 gallons

Water .....................................................15-18 gallons

Silica sand ..............................................200 pounds (70 to 90 mesh AFS)

##### NOTE

Mix thoroughly to ensure complete dispersion of ColorPlus.

##### APPLICATION

Apply mixed coating with a soft rubber squeegee. A minimum of two coats are recommended.

##### IMPORTANT

Surface and air temperatures must be above 50°F (10°C) during application and for at least 24 hours after application. Stir before using. Do not apply when rain is imminent or forecast. Keep from freezing. Close container when not in use.

##### COVERAGE

Yield calculations are based on undiluted gallons of Neutral Concentrate and vary according to surface texture and porosity within the limits below:

.05 to .07 gallon per square yard per coat.

##### DRYING TIME

Neutral Concentrate dries in 30 to 60 minutes under optimum drying conditions. Allow each coat of material to dry thoroughly before applying successive coats. Low ambient or low surface temperature and high humidity increase drying time. Allow coating to cure for 48 hours before opening up for play.

##### CAUTIONS

Do not store in direct sunlight or where temperatures exceed 100°F. Do not apply if rain is imminent or forecast. Keep from freezing. Close container when not in use. Refer to product Safety Data Sheet (SDS) for additional safety information and precautions.

##### WARRANTY

The statements made on this technical bulletin are believed to be true and accurate, and are intended to provide a guide for approved construction practices. Manufacturer does not make, nor does it authorize any agent or representative to make any warranty, express

####  NEUTRAL CONCENTRATE CMT-38

**REVISED 12/19**

or implied, concerning this material as workmanship, weather, construction, equipment utilized and other variables affecting results are all beyond our control. Manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only.

In no event shall Manufacturer be liable for any injury, loss or damage, either direct or incidental, special or

consequential, however arising, in connection with material or equipment furnished or work performed. Manufacturer shall not, in any manner, be liable for any defects, variations or change in condition in the substructure over which its products are installed.

Copyright© 2019, SportMaster All rights reserved.

ThorWorks Industries, Inc.

P.O. Box 2277

Sandusky, OH 44870

Phone: 1-800-326-1994 FAX: 1-419-626-5477 www.sportmaster.net