

**ARKANSAS STATE HIGHWAY COMMISSION
ARDOT - EQUIPMENT AND PROCUREMENT DIVISION
BID INVITATION**

Bid Number: Contract No. H-19-259P

BID OPENING LOCATION:
ARDOT Equipment and
Procurement Division
11302 W. Baseline Road
Little Rock, AR 72209

MAIL TO:
ARDOT Equipment and
Procurement Division
P.O. Box 2261
Little Rock, AR 72203

DELIVER TO:
ARDOT Equipment and
Procurement Division
11302 W. Baseline Road
Little Rock, AR 72209

Bid Opening Date: March 12, 2019 Time: 11:00 a.m.

Sealed bids for furnishing the commodities and/or services described below, subject to the Standard Bid Conditions of this Bid Invitation will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: _____

Name (Type or Print): _____

Address: _____

Title: _____

Phone: _____ Fax: _____

City: _____ State: _____ Zip: _____

E-mail Address: _____

Federal Tax ID or Social Security No.: _____

Signature: _____

Signature must be legible, original (not photocopied) and in ink.
Unsigned bids will be rejected.

Item No.	Description	Quantity	Unit	Unit Price	Amount
	<p>Supply Contract for furnishing to the Arkansas Department of Transportation <u>Fast Dry Acrylic Waterborne Traffic Marking Paint</u> according to specifications attached to and made a part of this bid, at pricing set forth on Page 2 for the period beginning April 1, 2019 thru March 31, 2020, with an option to renew upon mutual agreement by both parties.</p> <p>FOB: ARDOT – Maintenance Division, Sign Shop, 11300 W. Baseline Rd., Little Rock, AR 72209</p> <p>ALL OR NONE BID <u>ONLY</u> WILL BE CONSIDERED.</p> <p><i>All bidders should complete and return the Eligible Bidder Certification (Attachment A), Disclosure Form (see Page 2 of Standard Bid Conditions – Item 18), Restriction of Boycott of Israel Certification and Illegal Immigrant Certification (see Page 2 of Standard Bid Conditions – Item 17) issued with this bid.</i></p> <p>The Department is not obligated to purchase any specific quantity or make purchases at any specific time during the contract period. It is estimated that approximately 400,000 gallons of paint will be purchased during the <u>one year period</u>. A typical order would be a minimum of 30,000 gallons with delivery to be made within 30 days.</p> <p>All deliveries must be made on “flat-bed” trailers for ease of off loading by forklifts.</p> <p>The Bid Invitation, Bid Form and Specifications are parts of the contract and by this reference are incorporated herein as fully and effectively as if set forth in detail herein. It shall be understood that by submission of bid that bidder agrees to the conditions herein specified and, if bid is found acceptable by the Department either in whole or in part, shall consider this bid a contract agreement bound under these conditions. The parties hereto agree that this contract in all things shall be governed by the Laws of the State of Arkansas. Should there be a conflict between conditions printed on Standard Bid Conditions and other conditions stated with Bid Information and Specifications, the latter shall prevail.</p> <p>Bid Bond in the amount of \$500.00 required of all bidders at time of bid opening or bid will be rejected. <u>Personal and company checks are not acceptable as Bid Bonds.</u> See Condition 4 on page 1 of Standard Bid Conditions. Performance Bond an amount to be determined by the Department, not to exceed \$5,000.00, will be required of successful bidder prior to providing goods/services. <u>Personal and company checks are not acceptable as Performance Bonds.</u> See Condition 4 on page 1 of Standard Bid Conditions.</p> <p>Bids and Specifications are available on-line by going to the ARDOT Web Site – www.ardot.gov and clicking on “Commodities and Services Bids/Contracts Information”. Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.</p> <p><i>TWO SIGNED COPIES OF BID INVITATION MUST BE SUBMITTED.</i></p>				
13-01					

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS
ARDOT - EQUIPMENT & PROCUREMENT DIVISION

Contract No. H-19-259P
Page 2 of 2

BIDDER: _____

-
- | | |
|---|---------------------|
| 1. White – 55 gallon Steel Drum | \$ _____ per gallon |
| 2. Yellow – 55 gallon Steel Drum | \$ _____ per gallon |
| 3. White – 250 gallon Stainless Steel Tote | \$ _____ per gallon |
| 4. Yellow – 250 gallon Stainless Steel Tote | \$ _____ per gallon |

Acrylic Waterborne proposed to furnish:

Item 1. Brand _____ No. _____

Item 2. Brand _____ No. _____

Item 3. Brand _____ No. _____

Item 4. Brand _____ No. _____

Cooperative Purchasing.

Other tax-supported entities* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase commodities covered in this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing minimum order quantities, etc.) as agreed by both parties, but could not be raised above the contract bid price under any circumstances. Vendors would not be required to sell to any such entity under this Contract, and those entities would not be obligated to purchase from the Contract.

Each entity wishing to purchase from the Contract would make contact directly with the appropriate vendor(s). ARDOT would remain “out of the loop” for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. ARDOT would be held harmless of any and all liability arising from such transactions.

*Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

ARDOT - STANDARD BID CONDITIONS

1. **GENERAL:** Any special terms and conditions included in the invitation for bid override these standard terms and conditions. The standard terms and conditions and any special terms and conditions become part of any contract entered into if any or all parts of the bid are accepted by the Arkansas Department of Transportation (ARDOT).
2. **ACCEPTANCE AND REJECTION:** ARDOT reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
3. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
4. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by ARDOT or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company that is authorized to do business in the State of Arkansas and that is listed on the current United States Department of the Treasury Listing of Approved Sureties. Surety bonds must be executed by a resident or non-resident agent who is licensed by the Arkansas State Insurance Commissioner to represent the surety company executing the bond, and the resident or non-resident agent shall file with the bond the power of attorney of the agent to act on behalf of the bonding company. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
5. **TAXES:** The ARDOT is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the ARDOT as an addition thereto, and should be added to the billing to the ARDOT. The ARDOT is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the ARDOT.
6. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
7. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
8. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
9. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
10. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.

11. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of ARDOT request, and free demonstrations within 30 days, unless ARDOT extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by ARDOT. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
12. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
13. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the ARDOT, as soon as possible, of the reason for any delay and the expected delivery date. The ARDOT has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
14. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by ARDOT after delivery. Default in promised delivery or failure to meet specifications authorizes the ARDOT to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
15. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).
16. **NOTICE OF NONDISCRIMINATION:** The Arkansas State Highway Commission, through ARDOT, complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, ARDOT does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status in the admission, access to and treatment in the ARDOT's programs and activities, as well as the ARDOT's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the ARDOT's nondiscrimination policies may be directed to Joanna P. McFadden Section Head – EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501)569-2298, (Voice/TTY 711), or the following email address: joanna.mcfadden@ardot.gov. Free language assistance for Limited English Proficient individuals is available upon request. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.
17. **PROHIBITION OF EMPLOYMENT OF ILLEGAL IMMIGRANTS:** Pursuant to Arkansas Code Annotated 19-11-105, all bidders must certify prior to award of a contract that they **do not** employ or contract with any illegal immigrant(s) in its contract with the state.
18. **DISCLOSURE:** Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that order, **shall** be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy **shall** be subject to all legal remedies available to the agency.

ATTACHMENT A

ELIGIBLE BIDDER CERTIFICATION

The Bidder represents and warrants for itself, its employees and its subcontractors and certifies they:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph two (2) of this Certification;
4. Have not within a one-year period preceding this application/Bid had one or more public transactions (Federal, State, or local) terminated for cause or default; and

The Bidder represents, warrants and acknowledges the understanding that restrictions placed on the employment of labor or on the scale of pay for the work on a contract will be the requirements of the Fair Labor Standards Act (Federal Wage-Hour Law) of 1938, 28 USC §201 et seq., and other applicable labor laws.

The person executing this Certification further represents, warrants and affirms the truthfulness and accuracy of the contents of the statements submitted on or with this Certification and understands that the provisions of 31 USC §3801 et seq. are applicable thereto.

BIDDER NAME

BY: _____

Signature

TITLE: _____

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR: _____ SUBCONTRACTOR NAME: _____

Yes No

BIDDER INFORMATION:

IS THIS FOR:

Goods? Services? Both?

TAXPAYER ID NAME: _____

YOUR LAST NAME: _____

FIRST NAME: _____

M.I.: _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP CODE: _____

COUNTY: _____

AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:

FOR INDIVIDUALS*

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark (✓)		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and how are they related to you? <small>(i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)</small>	
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Relation
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

None of the above applies

FOR AN ENTITY (BUSINESS)*

Indicate below if any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark (✓)		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?		
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Ownership Interest (%)	Position of Control
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

None of the above applies

Contract and Grant Disclosure and Certification Form

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.

As an additional condition of obtaining, extending, amending, or renewing a contract with a state agency I agree as follows:

1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM**. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.

2. I will include the following language as a part of any agreement with a subcontractor:

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.

3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM** completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

Signature _____	Title _____	Date _____
Vendor Contact Person _____	Title _____	Phone No. _____

Agency Use Only				
Agency Number _____	Agency Name _____	Agency Contact Person _____	Contact Phone No. _____	Contract or Grant No. _____

RESTRICTION OF BOYCOTT OF ISRAEL CERTIFICATION

Pursuant to Arkansas Code Annotated § 25-1-503, a public entity **shall not** enter into a contract valued at \$1,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel.

By signing below, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in § 25-1-503* If at any time after signing this certification the contractor decides to engage in a boycott of Israel, the contractor must notify the contracting public entity in writing.

If a company does boycott Israel, see Arkansas Code Annotated § 25-1-503.

Name of public entity	Arkansas Department of Transportation
Description of product or service	Waterborne Traffic Marking Paint
Contractor name	

Contractor Signature: _____

Date: _____

Signature must be hand written, in ink

“Public Entity” means the State of Arkansas, or a political subdivision of the state, including all boards, commissions, agencies, institutions, authorities, and bodies politic and corporate of the state, created by or in accordance with state law or regulations, and does include colleges, universities, a statewide public employee retirement system, and institutions in Arkansas as well as units of local and municipal government.

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ILLEGAL IMMIGRANT CERTIFICATION

Pursuant to Arkansas Code Annotated § 19-11-105, Contractor(s) **shall** certify with OSP that they do not employ or contract with illegal immigrants.

By signing below, the Contractor agrees and certifies that they do not employ illegal immigrants and will not employ illegal immigrants during the remaining aggregate term of the contract.

Bid Number/Contract Number	H-19-259P
AASIS Number	N/A
Description	Waterborne Traffic Marking Paint
Contractor name	

Contractor Signature: _____
Signature must be hand written, in ink

Date: _____

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS FOR WHITE AND YELLOW FAST DRY
ACRYLIC WATERBORNE TRAFFIC MARKING PAINT
USED WITH DROP-ON-BEADS
H-19-259P

These specifications cover a ready mixed waterborne, methanol free, lead free, chromium free, acrylic emulsion polymer based white and yellow traffic marking paint suitable for application on concrete and bituminous pavements.

The volatile content of the finished paint shall be less than 150 grams of volatile organic matter per liter of total non-volatile paint material in accordance with ASTM D3960.

The paint must be capable of being successfully applied by the Arkansas Department of Transportation's various types of traffic marking equipment at temperatures from 50 to 150 °F.

The paint shall be homogeneous, well ground, shall not settle badly or cake in the container, and shall be readily broken up with a paddle to a smooth, uniform consistency. It shall be free from dirt or other foreign matter and shall dry within the specified period to a good, tough, serviceable film. Any paint that has separated or settled after six months storage, to such an extent as to render it unusable, will be returned to the successful bidder for full refund or credit. The paint shall be properly strained during the final filling of containers and not more than one percent (1%) of coarse particles and skins shall be retained on a No. 325 sieve when tested according to Method 4092 of Federal Test Method Standard No. 141B.

Pint samples of ALL raw materials used in the paint shall be furnished to the Department of Transportation Laboratory. These raw materials shall be accompanied by a list of the trade name, manufacturer, and/or supplier and Manufacturer's Safety Data Sheets. Also, the paint manufacturer shall forward two (2) one-quart reference samples of material representative of that which he proposes to produce. If, during manufacturing, a raw material(s) supply changes, a pint sample of the new raw material(s) and two new reference samples shall be sent to the ARDOT Laboratory. Final acceptance will be based on samples taken at the destination by a representative of the Arkansas Department of Transportation. A minimum of one sample will be taken from each batch or shipment.

All materials used in the manufacture of these paints shall meet the requirements herein specified. Minor ingredients not specifically covered will be left to the discretion of the Manufacturer except that the finished product shall not be adversely affected. The suitability of raw materials from different sources for use in these paints will be the responsibility of the Manufacturer. Reactive or unstable products causing excessive viscosity or container instability will be cause for rejection of the paint.

The paint shall conform, on a weight basis, to the composition requirements of the formulation as closely as accepted good paint practice will permit. No intentional variation will be permitted except for replacement of volatiles lost in processing. Recognized test procedures will be used by the Department to determine the composition of the finished paint.

SPECIFICATIONS FOR RAW MATERIALS FOR PIGMENTS

1. **Rutile Titanium Dioxide.** This material shall comply with the latest revision of ASTM-D-476, Type II.
2. **Calcium Carbonate.** This material shall comply with the latest revision of the specification for Calcium Carbonate Pigments, ASTM D 1199, Type GC, Grade I, with minimum of 95% Calcium Carbonate and Type PC, minimum 98% Calcium Carbonate.
3. **Yellow Iron Oxide.** This material shall comply with the latest revision of ASTM D768.
4. **Pigment Yellow 65.** This material will only be allowed from Clariant, BASF, or Sun Chemical.
5. The pigments used for the pavement marking material shall not contain any compounds that will exceed the values listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1.

SPECIFICATIONS FOR RAW MATERIALS FOR VEHICLES

1. **Acrylic Emulsion Polymer.** The non-volatile portion of the vehicle shall be composed of a 100% acrylic polymer or 100% styrene acrylic polymer and shall not be less than 44.0% by weight. Acrylic emulsion polymer shall be Dow Fastrack 3427, Arkema Encor DT 250 or equal as determined by the Division Engineer, Materials.
2. **Propylene Glycol.** ASTM D5164 or **Ethylene Glycol** ASTM D2693.
3. **Water.** Potable.
4. **Coalescent.** Texanol
5. **Other Miscellaneous Materials.** To be approved by the Division Engineer, Materials.

PHYSICAL REQUIREMENTS OF THE FINISHED PAINT

1. **Pigment Composition.** Analysis of the extracted pigment shall conform to the following requirements:

	Percent by Weight	
	White	Yellow
Organic Yellow 65	---	Min. 7.5 *
Titanium Dioxide	Min. 13.4	Min. 6
Calcium Carbonate	Max. 86	Max. 87
Yellow Iron Oxide	---	Min. 0.3

* To be determined by x-ray fluorescence, color spectrophotometry, or any other method the Department may choose. This may be sent to an outside agency or organic pigment manufacturer. It also may include audit of the manufacturer's invoices, batch tickets, inventory or any other means determined by the Department.

2. Physical Properties.

% Total Solids by weight, minimum	73
% Volume Solids, minimum	58
% Pigment by weight	49-54
% Vehicle by weight	46-51
% Non-volatile in Vehicle by weight, minimum	44
Weight per Gallon, lbs.	± .30 Theo
Viscosity, 77 F, Krebs Units	83-98
Grind (Hegman Gage), minimum	3
Laboratory Dry Time, ASTM D 711, minutes, maximum	10
pH, minimum	9.6
Dry Through	130 minutes, maximum. No more than 15 minutes longer than the specifier's reference paint film.

- 3. Color.** The color after drying shall (for white) be a flat white, free from tint, furnishing good opacity and visibility under both daylight and artificial light. For yellow, the color shall closely match Color Chip 33538 of Federal Standard 595 and be $\pm 6\%$ from the PR 1 chart central color when read over the black portion of a 2A Leneta Chart on a 15 mil wet thickness.
- 4. Flexibility and Adhesion.** The paint shall adhere firmly and shall not show any evidence of cracking or flaking when a 15 mil wet thickness is tested in accordance with ARDOT Test Method 701.
- 5. Water Resistance.** The paint shall show no adhesion loss or blistering when a 15 mil wet film thickness is tested in accordance with ARDOT Test Method 701
- 6. Heat Stability.** The paint shall show no coagulation, discoloration or change in consistency greater than 10 Krebs Units, when tested in accordance with Federal Specification TT-P-1952B.
- 7. Dilution Test.** The paint shall be capable of dilution with water at all levels without curdling or precipitation such that the wet paint can be readily cleaned up with water only.
- 8. Storage Stability.** After 30 days storage in three-quarters filled, closed container, the paint shall show no caking that cannot be readily remixed to a smooth, homogeneous state, no skinning, livering, curdling, or hard settling. The viscosity shall not change more than 5 Krebs Units from the viscosity of the original sample.
- 9. Contrast Ratio.** The minimum contrast ratio shall be 0.96 when drawn down at a wet film thickness of 15 mils on a 2A Leneta Chart or equal and air dried for 24 hours, and tested according to the ARDOT Test Method 701. Contrast Ratio = Black/White.

- 10. Luminance Factor.** The daylight luminance factor (Y%) of the white paint shall not be less than 84% and not less than 50% for yellow paint of a 15 mil wet film applied to a 2A Leneta Chart or equal. After drying 24 hours, measure the reflectance of the paint over the black portion of the chart using an ASTM E 1347 with CIE illuminant D65 and the 1931 CIE 2° standard observer.
- 11. Bleeding Ratio.** The paint shall have a minimum bleeding ratio of 0.97 when tested in accordance with Federal Specification TT-P-1952B, except the asphalt saturated felt shall be Standard 15# roofing felt with the evaluation in accordance with ASTM E1347. The paint shall not check or crack on asphalt saturated 15# felt indicating unsuitability for use on fresh asphalt overlays. Any checking or cracking on the felt or on fresh asphalt cores will be cause for rejection.
- 12. Dry Through Time.** The paint shall be applied to a non-absorbent substrate at a wet film thickness of 15 ± 1 mils and placed in a humidity chamber controlled at $90 \pm 5\%$ R.H. and 72.5 ± 2.5 °F. The dry through time shall be determined according to ASTM D 1640, except that the pressure exerted shall be the minimum needed to maintain contact with the thumb and film.

PAINT FORMULATIONS

Pounds Per 100 Gallons

	White	Yellow
C.I. Pigment Yellow 65	---	50
Titanium Dioxide, Rutile, Type II	100	40
Yellow Iron Oxide	---	2
Calcium Carbonate, Type PC	150	125
Calcium Carbonate, Type GC	430	450
Hydroxy Ethyl Cellulose	0.5 *	0.3 *
Acrylic Emulsion	541	540
Texanol	23	23
Defoamer	5	6
Dispersant	8	10
Surfactant	2	2
Preservative	1.5	1.5
Water	20	20
Ethylene Glycol or Propylene Glycol	<u>25</u>	<u>25</u>
Total Pounds	1306	1294.8

* **Hydroxy Ethyl Cellulose amount may be varied by up to 0.1 pound to adjust viscosity to desired range.**

SPECIFICATIONS FOR CONTAINERS

The paint shall be supplied in containers that conform to Title 49 of the Code of Federal Regulations (49 CFR), parts 107 and 171-179. The container shall be filled with paint within 1% of specified quantity.

The containers as received shall have enough free space to allow the immersion of pumping equipment without causing the material to spill over the edge. All containers (steel drums and stainless steel totes) shall have standard 22.5” diameter removable lids with a locking ring secured with 5/8” locking bolts and nuts. The lids shall have the date the paint was manufactured labeled on them. All paint shall be manufactured after the date of order.

The department will specify Steel Drums or Stainless Steel Totes and quantities with each order.

55 Gallon Steel Drums

The steel drums shall be new, non-leaking 55 gallon, lined steel drums, non-returnable, with 3 rolling hoops. Minimum metal thickness is to be 1.09 mm. The steel drum shall comply with UN packing label regulations and the UN1A2/Y1.5/100 label shall be embossed on the bottom of the drum for proper disposal or recycling. The color of the drums and lids shall match the color of the paint in the drums. There shall be no bungholes in the lids or the drums. The steel drum shall be capable of being stacked three (3) high when full of paint. The steel drum shall be filled to 52 gallons of paint.

250 Gallon Stainless Steel Totes

The stainless steel totes may be new or recycled. The totes shall have four (4) corner lifting lugs, four (4) corner legs providing a minimum of 5-1/2” clearance, sloped interior bottom for draining, vent and recirculation valves, and 2” bottom outlet with 2” NPT stainless steel ball valve and 2” male camlock coupler and cap. The tote shall have 4-way forklift access for load and unloading. The tote shall have a label with quantity, paint manufactured date, and color on the side. The tote shall also have a colored label the same color of the paint on all four (4) sides of the tote a minimum of six (6) inches high by six (6) inches wide. The tote shall be capable of being stacked three (3) high when full of paint and four (4) high when empty. The tote shall be filled to 250 gallons of paint.

The vendor shall schedule and pick-up empty totes within 60 sixty days after notification.