



Structural Materials and Pavement Markings Division

David Malburg, Division Chief

443-572-5298

Timothy Howard, Assistant Division Chief - Metals, Coatings, and Structural Materials

443-572-5278

Doc Tisdale, Assistant Division Chief - Pavement Markings

443-572-5296

Material Quality Assurance Processes

Pavement Marking Mat'l: Liquid Applied

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 2

Source Level Materials	Specification	Comments
White Waterborne Pavement Marking Paint	951.01	
Yellow Waterborne Pavement Marking Paint	951.01	
White High Binder Thermoplastic (40-mil)	951.05	
Yellow High Binder Thermoplastic (40-mil)	951.05	
White Epoxy Pavement Markings	951.03	
Yellow Epoxy Pavement Markings	951.03	
White Thermoplastic (90-mil)	951.04	
Yellow Thermoplastic (90-mil)	951.04	
White Polyurea Pavement Markings	951.10	
Yellow Polyurea Pavement Markings	951.10	
Green Methyl Methacrylate	Special Provisions	
Red Methyl Methacrylate	Special Provisions	
White Methyl Methacrylate	Special Provisions	
Yellow Methyl Methacrylate	Special Provisions	

Plant or Product Qualification

Pavement Marking Facility Review

Facility Qualification

Producers must be inspected and qualified for use before they are eligible to supply to state projects and within two years of their last qualification. During the review the manufacturer shall provide a quality control plan that will be reviewed and approved by OMT. If approved the QC plan shall be authorized and sent back to the production facility, a copy will be kept with OMT.

Inspection of Production Facility

1 per 24 Months

Pavement Marking Product Review

Product Qualification

Products of this material category must be qualified prior the source request to be considered for usage on State projects. The current Qualified List and procedures to be included on the list can be found at <http://www.roads.maryland.gov/index.aspx?PageID=600>.

Qualification of Material Product.

1 per 1 Prior to Source Request

Material Quality Assurance Processes

Pavement Marking Mat'I: Liquid Applied

Structural Materials and Pavement Markings Division

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Pavement Marking Product Acceptance

Product QC/QA

Each batch of material is to be tested and authorized by OMT before it is used on a State project. The SHA inspector will sample the material at the production facility and submit the sample along with a certification with test data to the Pavement Marking team for review and testing (with the assistance of the Chemical Team). If approved, the certification will be stamped and returned to the producer. This stamped document will need to accompany all deliveries of the material to the project. This process authorizes the batch of product to be used on any SHA project that has already sourced the same producer and product.

Material sample to be taken by SHA and Producer to provide material certification conforming to TC 1.03 w/ test data to SHA for review, testing, and stamping. The stamped certification will be returned to the producer.

Sample Size: Paints: 3-1 Pint; Epoxy 3-1 Pint (Each Component); Thermoplastic: 1 gallon

1 per 1 Batch, Lot or Heat

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Material Producers and product must be on a qualified list and associated correctly prior to source approval. If the Contractor sources a producer or product that is not on the qualified list he will be advised that the source approval is contingent on a qualification process, the procedures, and duration. Refer to Facility and Product Qualification tasks above for further information.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Project Construction

Pavement Marking Material Verification at Project Site

Material Verification

The stamped certification approving the specific batch of material product will accompany the delivery to the project site. Upon receipt the Project Engineer shall verify the certification as been reviewed, stamped, and matches the delivered material. This certification will be submitted to the Materials Management Division for Materials Clearance. The PE will also ensure the material is of acceptable quality before authorizing its placement.

Project Engineer to collect manufacture's certifications (TC 1.03 w/ test data) and OMT stamped documentation approving the material batch, submit to MMD for clearance.

Project Engineer should take note of the shelf life of the product.

1 per 1 Delivery to Project

Post Placement Project Wide Testing

Project Wide Testing

Once placement is complete OMT shall perform field testing to ensure the proper reflectivity is achieved.

Field Testing at Project Site by the Pavement Marking Team as per MSMT 729.

1 per 1 Item Completion

Material Quality Assurance Processes

Pavement Marking Mat'l: Non-Liquid and Preformed

Structural Materials and Pavement Markings Division

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Source Level Materials	Specification	Comments
Blackout Tape Pavement Markings	951.08.02	
White Tape Pavement Markings	951.08.01	
Yellow Tape Pavement Markings	951.08.01	
White Preformed Thermoplastic Pavement Markings	951.06	
Yellow Preformed Thermoplastic Pavement Markings	951.06	
Lens for Recessed SRPM without Holders	951.07	
Lens for SRPM with holders	951.07	
Recessed Pavement Marker Casting	951.07	
SRPM Holders	951.07	
Temporary Raised Pavement Markers	104.03, 104.03.02	

Plant or Product Qualification

Pavement Marking Facility Review

Facility Qualification

Producers must be inspected and qualified for use before they are eligible to supply to state projects and within three years of their last qualification. During the review the manufacturer shall provide a quality control plan that will be reviewed and approved by OMT. If approved the QA plan shall be stamped and sent back to the production facility, a copy shall be kept with OMT.

Inspection of Production Facility

1 per 36 Months

Pavement Marking Product Review

Product Qualification

Products of this material category must be qualified prior the source request to be considered for usage on State projects. The current Qualified List and procedures to be included on the list can be found at <http://www.roads.maryland.gov/index.aspx?PageID=600>.

Qualification of Material Product

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

RPM lenses that are specifically manufactured for recessed pavement markers or SRPMs are not permitted to be substituted for one another.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Project Construction

Material Quality Assurance Processes

Pavement Marking Mat'I: Non-Liquid and Preformed

Structural Materials and Pavement Markings Division

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Pavement Marking Material Verification at Project Site

Material Verification

Project Engineer to collect manufacturer's Certification (TC 1.03 w/o test data), and submit certifications to MMD for clearance.

1 per 1

Delivery to Project

Post Placement Project Wide Testing

Project Wide Testing

Once placement is complete OMT shall perform field testing to ensure the proper reflectivity is achieved.

Field Testing at Project Site by the Pavement Marking Team as per MSMT 729.

1 per 1

Item Completion

Material Quality Assurance Processes

Pavement Marking Mat'l: Other

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 2

Source Level Materials	Specification	Comments
Epoxy for SRPM	951.05	
Glass Beads	951.09	
Optical Glass Curb Markers	Special Provisions	

Plant or Product Qualification

Pavement Marking Facility Review

Facility Qualification

Producers must be certified every year to be eligible to supply to state projects

Inspection of Production Facility

1 per 12 Months

Pavement Marking Product Review

Product Qualification

New product formulations must be evaluated by SHA prior to consideration for use on State projects. Submit required documentation through the MPEL evaluation system (<http://apps.roads.maryland.gov/mpel/>)

Evaluate new material products through the MPEL process

1 per 1 Prior to Usage on Project

Pavement Marking Product Acceptance

Product QC/QA

Each batch of material is to be reviewed by OMT before it is used on State projects. The producers will submit a material certification with test data to the Pavement Marking team for review. If approved, the certification will be stamped and returned to the producer. This stamped document will need to accompany all deliveries of the material to state projects. This process authorizes the batch of product to be used on any State project that has already sourced the same producer and product.

Producer to submit material certification conforming to TC 1.03 w/ test data to OMT's Pavement Marking team for review, stamping, and return.

1 per 1 Batch, Lot or Heat

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Project Construction

Material Quality Assurance Processes

Pavement Marking Mat'l: Other

Structural Materials and Pavement Markings Division

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Pavement Marking Material Verification at Project Site

Material Verification

The stamped certification approving the specific batch of material product will accompany the delivery to the project site. Upon receipt the Project Engineer shall verify the certification has been reviewed, stamped, and matches the delivered material. This certification will be submitted to the Materials Management Division for Materials Clearance. The PE will also ensure the material is of acceptable quality before authorizing its placement.

Project Engineer to collect OMT stamped manufacturer's certification (TC 1.03 w/ test data) and submit them to MMD for clearance.

1 per 1

Delivery to Project

Material Quality Assurance Processes

Material Listing for Structural Materials

Material (Source Level)	Specification	Process Category (Design Level)	Page Number	Material Comment
08" Offset Block		SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
10" Offset Block		SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
12" Offset Block		SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Adjustment Ring	909.02	SM Group 2 - General Approval with Certification	SMPMD-13	
All Purpose Bonding Agent		SM Group 2 - General Approval with Certification	SMPMD-13	
Aluminum Signs	813, 950.08.01	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Anchor Bolts, Fabricated Systems	909.08	SM Group 5 - Producer and Batch Data Tracked	SMPMD-19	
Applied Fiberglass and Epoxy Pile Wrap		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Asphalt Saturated Fabric	913.03	SM Group 2 - General Approval with Certification	SMPMD-13	
Bearings, Elastomeric Structural	910.02.01	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Bearings, Structural	910.01	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Bituminous Fiber Filler	911.02	SM Group 2 - General Approval with Certification	SMPMD-13	
Brick Paver		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Bridge Mounted Sign Supports	433	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Building Brick	903.03	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Chain Link Fencing	914.01	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Concrete Epoxy Coating	917.01	SM Group 7 - Qualified Facilities, Cert Review	SMPMD-22	
Concrete Pavement Tie Devices	908.10	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Concrete Paver		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Corrugated Polyethylene Pipe	905	SM Group 2 - General Approval with Certification	SMPMD-13	
Corrugated Polyethylene Pipe Elbow	905	SM Group 2 - General Approval with Certification	SMPMD-13	

Material Quality Assurance Processes

Material Listing for Structural Materials

Material (Source Level)	Specification	Process Category (Design Level)	Page Number	Material Comment
Cured-in-Place Pipe Lining (CIPP)	Special Provisions	SM Group 2 - General Approval with Certification	SMPMD-13	
Dowel Bar Sleeves	908.04	SM Group 2 - General Approval with Certification	SMPMD-13	
Drainage Trough Assembly	909.1	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Ductile Iron Pipe	Special Provisions	SM Group 2 - General Approval with Certification	SMPMD-13	
DWS Type I - Detectable Warning Surface	925	SM Group 4 - Detectable Warning Surfaces	SMPMD-18	
DWS Type IIA - Detectable Warning Surface	925	SM Group 4 - Detectable Warning Surfaces	SMPMD-18	
DWS Type IIB - Detectable Warning Surface	925	SM Group 4 - Detectable Warning Surfaces	SMPMD-18	
DWS Type III - ADA Brick Paver	925	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
DWS Type IV - Detectable Warning Surface	925	SM Group 4 - Detectable Warning Surfaces	SMPMD-18	
Elastomeric Closed Cell Neoprene Sponge	911.10	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Elastomeric Inserts	911.04	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Epoxy & Polyester Coating Application for Metals	917.02, 917.03	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Epoxy Powder Coating	917.02	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Expansion Joints in Structures, Complex/Finger	460	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Expansion Joints in Structures, Simple	460	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Fiberglass Catch Basin		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Fiberglass Scuppers	921.11	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Galvanized Steel Beam Sign Posts	802	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Galvanizing Application for Metals	465	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Galvanizing Material		SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	

Material Quality Assurance Processes

Material Listing for Structural Materials

Material (Source Level)	Specification	Process Category (Design Level)	Page Number	Material Comment
General Epoxy Adhesive	921.04	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
General Use Bolts, Nuts and Washers	909.06	SM Group 2 - General Approval with Certification	SMPMD-13	
Gray Iron Casting (Scupper, Drain Grate, Inlet)	909.04	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
HDPE	905	SM Group 2 - General Approval with Certification	SMPMD-13	
High Strength Bolts, Nuts and Washers	909.07	SM Group 2 - General Approval with Certification	SMPMD-13	Certification requires test data
Hollow Concrete Masonry Block	903.04	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
HP Pile	907.03	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Lighting Structures		SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Loop Detector Sealer	911.06	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Manhole Brick	903.02	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Metal Hand Box and Components		SM Group 1 - General Approval	SMPMD-12	
Metal Pipe	905	SM Group 2 - General Approval with Certification	SMPMD-13	
Metal Railing, Bridge Railing	461	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Metal Structures, Bridge Steel	430	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Metal Traffic Barrier, Certified Installer	605	SM Group 6 - Qualified Facilities, Limited Review	SMPMD-21	
Metal Traffic Barrier, Manufacturer	605	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Micro Piles	907.03, Special Provisions	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Misc. Metal Materials	909	SM Group 2 - General Approval with Certification	SMPMD-13	
Misc. Metal Poles and Posts	909.02	SM Group 2 - General Approval with Certification	SMPMD-13	
Misc. Preformed Joint Material	911.03	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
MSE Reinforcing Strips	Special Provisions	SM Group 3 - Evaluation Before Shipment	SMPMD-15	

Material Quality Assurance Processes

Material Listing for Structural Materials

Material (Source Level)	Specification	Process Category (Design Level)	Page Number	Material Comment
Neoprene Bridge and Roadway Seals	911.05	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Neoprene Drainage Trough	911.11.01	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Noise Barriers, Steel Post	455	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Ornamental Fencing	Special Provisions	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Ornamental Lighting Pole	Special Provisions	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Overhead Sign Structures	803	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Pile Jacket	921.11	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Pile Tip	909.07	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Pipe Pile, Steel	410	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Polyester Powder Coating, Material	917.03	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Polyvinyl Chloride (PVC) Pipe and Accessories	905	SM Group 1 - General Approval	SMPMD-12	PE to confirm UL Stamp
Polyvinyl Chloride (PVC) Profile Wall Pipe	905	SM Group 1 - General Approval	SMPMD-12	PE to confirm UL Stamp
Pourable Silicon Joint Sealer for Bridges		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Preformed Fabric Drainage Trough	911.11.02	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Pre-Formed Fabric Pads	910.02.03	SM Group 7 - Qualified Facilities, Cert Review	SMPMD-22	
Sewer Brick	903.01	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Sheet Pile	907.04	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Signal Structures		SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Silicone Joint Sealer / Crack Filler	911.01.01	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Solid Concrete Masonry Block	903.05	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Specialty Metal Products	Special Provisions	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Stay-in-Place Form	909.11	SM Group 2 - General Approval with Certification	SMPMD-13	Certification requires test data.

Material Quality Assurance Processes

Material Listing for Structural Materials

Material (Source Level)	Specification	Process Category (Design Level)	Page Number	Material Comment
Steel Frame and Cover	909.04	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Steel Prestressing/Post Tensioning Strand	908.11	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Steel Reinforcing Bars, Fabricated	908	SM Group 7 - Qualified Facilities, Cert Review	SMPMD-22	
Steel Reinforcing, Not Fabricated	908	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Steel Span Wire	950.09	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Steel Stud Shear Developers	909.05	SM Group 3 - Evaluation Before Shipment	SMPMD-15	Used when studs are welded at the jobsite. Related to specific category code numbers.
Steel Wire Reinforcement Fabric, Welded	908.05	SM Group 8 - Qualified Facilities, Production Insp	SMPMD-24	
Structural Steel Liquid Coating, Application	465	SM Group 9 - Qualified Facilities, Not Sourced	SMPMD-26	
Structural Steel Liquid Coating, Manufacturer	912.05	SM Group 7 - Qualified Facilities, Cert Review	SMPMD-22	
Structural Timber and Lumber	921.05	SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Super Silt Fencing Structure	914.01.01	SM Group 1 - General Approval	SMPMD-12	
Threaded Rod Coupler		SM Group 3 - Evaluation Before Shipment	SMPMD-15	
Tie Wires	914.02	SM Group 2 - General Approval with Certification	SMPMD-13	
Tubular Steel Anchor Base		SM Group 1 - General Approval	SMPMD-12	
Tubular Steel Sign Post		SM Group 1 - General Approval	SMPMD-12	
Waterproofing Sheeting	913.04	SM Group 2 - General Approval with Certification	SMPMD-13	
Wire for Gabions / Baskets	906.01	SM Group 2 - General Approval with Certification	SMPMD-13	
Wood for Misc. Use		SM Group 1 - General Approval	SMPMD-12	
Wood Sign Supports		SM Group 3 - Evaluation Before Shipment	SMPMD-15	

Material Quality Assurance Processes

SM Group 1 - General Approval

Structural Materials and Pavement Markings Division

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Source Level Materials	Specification	Comments
Metal Hand Box and Components		
Polyvinyl Chloride (PVC) Pipe and Accessories	905	PE to confirm UL Stamp
Polyvinyl Chloride (PVC) Profile Wall Pipe	905	PE to confirm UL Stamp
Super Silt Fencing Structure	914.01.01	
Tubular Steel Anchor Base		
Tubular Steel Sign Post		
Wood for Misc. Use		

Plant or Product Qualification

Review of Misc Production Location

Limited Producer Check

General review of producer information. No production qualification required.

Production facility data maintained to track the material supply chain.

Address and low level information is maintained to provide data of facilities that produce materials in this category. Facilities that produce material in this category will be given a status of "Project Specific Review Required."

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request is not required.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to submit Form 14 to the Materials Management Division confirming the material and its placement are acceptable and conform to specifications.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 2 - General Approval with Certification

Structural Materials and Pavement Markings Division

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Source Level Materials	Specification	Comments
Adjustment Ring	909.02	
All Purpose Bonding Agent		
Asphalt Saturated Fabric	913.03	
Bituminous Fiber Filler	911.02	
Corrugated Polyethylene Pipe	905	
Corrugated Polyethylene Pipe Elbow	905	
Cured-in-Place Pipe Lining (CIPP)	Special Provisions	
Dowel Bar Sleeves	908.04	
Ductile Iron Pipe	Special Provisions	
General Use Bolts, Nuts and Washers	909.06	
HDPE	905	
High Strength Bolts, Nuts and Washers	909.07	Certification requires test data
Metal Pipe	905	
Misc. Metal Materials	909	
Misc. Metal Poles and Posts	909.02	
Stay-in-Place Form	909.11	Certification requires test data.
Tie Wires	914.02	
Waterproofing Sheeting	913.04	
Wire for Gabions / Baskets	906.01	

Plant or Product Qualification

Review of Misc Production Location

Limited Producer Check

General review of producer information. No production qualification required.

Production facility data maintained to track the material supply chain.

Address and low level information is maintained to provide data of facilities that produce materials in this category. Facilities that produce material in this category will be given a status of "Project Specific Review Required."

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request is not required.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Material Quality Assurance Processes

SM Group 2 - General Approval with Certification

Structural Materials and Pavement Markings Division

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Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect manufacturer's certification (TC 1.03 w/o test data) indicating the specification to which the material conforms. Submit certification with Form 14 Stamp to the Materials Management Division for clearance.

1 per 1 Delivery to Project

Project Engineer to collect manufacturer's certification (TC 1.03 with test data) indicating the specification to which the material conforms. Submit certification with Form 14 Stamp to the Materials Management Division for clearance.

Applicable for materials that require certifications with test data (See material comments).

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 3 - Evaluation Before Shipment

Structural Materials and Pavement Markings Division

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Source Level Materials	Specification	Comments
Applied Fiberglass and Epoxy Pile Wrap		
Brick Paver		
Building Brick	903.03	
Chain Link Fencing	914.01	
Concrete Pavement Tie Devices	908.10	
Concrete Paver		
Drainage Trough Assembly	909.1	
DWS Type III - ADA Brick Paver	925	
Elastomeric Closed Cell Neoprene Sponge	911.10	
Elastomeric Inserts	911.04	
Fiberglass Catch Basin		
General Epoxy Adhesive	921.04	
Hollow Concrete Masonry Block	903.04	
HP Pile	907.03	
Loop Detector Sealer	911.06	
Manhole Brick	903.02	
Micro Piles	907.03, Special Provisions	
Misc. Preformed Joint Material	911.03	
MSE Reinforcing Strips	Special Provisions	
Neoprene Bridge and Roadway Seals	911.05	
Neoprene Drainage Trough	911.11.01	
Ornamental Fencing	Special Provisions	
Ornamental Lighting Pole	Special Provisions	
Pile Jacket	921.11	
Pile Tip	909.07	
Pipe Pile, Steel	410	
Pourable Silicon Joint Sealer for Bridges		
Preformed Fabric Drainage Trough	911.11.02	
Sewer Brick	903.01	
Sheet Pile	907.04	
Silicone Joint Sealer / Crack Filler	911.01.01	
Solid Concrete Masonry Block	903.05	
Specialty Metal Products	Special Provisions	

Material Quality Assurance Processes

SM Group 3 - Evaluation Before Shipment

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Steel Prestressing/Post Tensioning Strand	908.11	
Steel Span Wire	950.09	
Steel Stud Shear Developers	909.05	Used when studs are welded at the jobsite. Related to specific category code numbers.
Structural Timber and Lumber	921.05	
Threaded Rod Coupler		
Wood Sign Supports		

Plant or Product Qualification

Review of Misc Production Location

Limited Producer Check

General review of producer information. No production qualification required.

Production facility data maintained to track the material supply chain.

Address and low level information is maintained to provide data of facilities that produce materials in this category. Facilities that produce material in this category will be given a status of "Project Specific Review Required."

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request may be required to confirm the material selection and request input on the evaluation criteria.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Material Production

OMT approval of material for shipment, Structural Materials

Material Certification for Project Usage

Submit Material Certification (TC 1.03 w/ Batch Specific Test Data) to metals@sha.state.md.us for review prior to delivery. If acceptable the document will be stamped by OMT and returned to the supplier to accompany the material to the project site.

1 per 1 Prior to Usage on Project

The Structural Materials team will inspect the material, all relevant certifications, and may take material samples at the production facility. Please contact metals@sha.state.md.us to schedule an inspection.

Only to be utilized with input from the structural materials team. Typically used for metal materials or structural timber.

1 per 1 Prior to Usage on Project

Material Quality Assurance Processes

SM Group 3 - Evaluation Before Shipment

Structural Materials and Pavement Markings Division

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Submit Material Certification (TC 1.03 w/o test data) for timber preservatives to metals@sha.state.md.us. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the material to the project site.

Only applicable for non-structural timber materials

1 per 1 Prior to Usage on Project

Submit Sample, Form 88 and Material Certification (TC 1.03 w/o test data) for clay brick materials to OMT for evaluation. Form 88 will be returned to PE. Alternate sampling may be requested by contacting metals@sha.state.md.us 3 weeks prior to delivery.

Only applicable for Clay Brick

10 Bricks

Requirement waived if the quantity is less than 200 EA per day or 1000 EA per project.

1 per 50,000 Each

Submit Sample, Form 88 and Material Certification (TC 1.03 w/o test data) for concrete block to OMT for evaluation. Form 88 will be returned to PE. Alternate sampling may be requested by contacting metals@sha.state.md.us 3 weeks prior to delivery.

Only applicable for Masonry Concrete Block

6 Blocks

Requirement waived if the quantity is less than 200 EA per day or 1000 EA per project.

1 per 6,000 Each

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 4 - Detectable Warning Surfaces

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 1

Source Level Materials	Specification	Comments
DWS Type I - Detectable Warning Surface	925	
DWS Type IIA - Detectable Warning Surface	925	
DWS Type IIB - Detectable Warning Surface	925	
DWS Type IV - Detectable Warning Surface	925	

Plant or Product Qualification

Review of Producer (SM)

Facility Qualification

Production facility data maintained to track the material supply chain and provide a basis for qualified products.

Address and low level information is maintained to provide data of facilities that produce this category's material types. Facilities that produce materials in this category will be given a status of "Product Qualification Required".

1 per 1 Prior to Source Request

Review of Product (SM):

Product Qualification

Qualification of Material Product for use on State Projects.

New products for this category will be evaluated through the MPEL system. Navigate to "<http://www.roads.maryland.gov/index.aspx?PageID=600>" for the current qualified list and detailed procedures. Navigate to "<http://apps.roads.maryland.gov/MPEL/>" for new submissions.

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Source of Supply Processing

The products of materials for this group must be qualified for state use prior to the approval of the Source of Supply request. If the contractor requests a product that is not on the qualified list he will be provided the link to the MPEL system (<http://apps.roads.maryland.gov/MPEL/>). qualification procedures, anticipated review duration, and be advised thta the source approval is contingent on the product qualification.

1 per 1 Prior to Usage on Project

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect certifications (TC 1.03 w/o test data) and submit certs to OMT for clearance.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 5 - Producer and Batch Data Tracked

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 2

Source Level Materials	Specification	Comments
Anchor Bolts, Fabricated Systems	909.08	

Plant or Product Qualification

Review of Misc Production Location

Limited Producer Check

General review of producer information. No production qualification required.

Production facility data maintained to track the material supply chain.

Address and low level information is maintained to provide data of facilities that produce materials in this category. Facilities that produce material in this category will be given a status of "Project Specific Review Required."

1 per 1 Prior to Source Request

Review of Product (SM):

Product Qualification

Maintain data on each heat or batch of product used on State projects.

Each heat or batch of produced material is considered its own product. Data will be maintained for tracking purposes but does not need to be referenced on the Source of Supply request. If the testing is acceptable OMT will stamp the material certification and provide it to the producer. A copy of this certification must accompany the shipment of material to the project site. The approved certification may be used on for any state project that the producer has been approved for until the related heat or batch has been exhausted.

1 per 1 Batch, Lot or Heat

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request required to confirm producer and initiate data tracking procedures.

Source of Supply Processing

1 per 1 Prior to Usage on Project

Material Production

OMT approval of material for shipment, Structural Materials

Material Certification for Project Usage

Batch/Heat of Material must be approved by OMT. The producer to submit Material Certification (TC 1.03 w/ test data) and Sample to Structural Materials for evaluation. Contact metals@sha.state.md.us for further information.

Each batch/heat of material must be approved by the Structural Materials team. If the batch/heat of material that will be shipped has not been approved by OMT (for this or any other project) the producer needs to submit a sample and certification related to the batch/heat for evaluation.

1 per 1 Batch, Lot or Heat

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Material Quality Assurance Processes

SM Group 5 - Producer and Batch Data Tracked

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 2 of 2

Project Engineer to collect OMT stamped Material Certification (TC 1.03 w/ test data) and submit to the Materials Management Division for materials clearance.

1 per 1

Delivery to Project

Material Quality Assurance Processes

SM Group 6 - Qualified Facilities, Limited Review

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 1

Source Level Materials	Specification	Comments
Metal Traffic Barrier, Certified Installer	605	

Plant or Product Qualification

Review of Producer (SM)

Facility Qualification

Facility to be qualified for state projects (and re-qualified annually) and issued an OMT certification stamp before it is sourced to a project.

The material producer (in some cases supplier) shall be reviewed by the Structural Material Division prior to the producer being named as a source of supply. Facilities that have not produced for an MD project in one year will need to be re-audited.

1 per 1 Prior to Source Request
1 per 12 Months

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request required when the producer's status is "Plant Evaluation Required".

Source of Supply Processing

The material producer must be "Qualified for State Projects" and associated to the Source of Supply request properly for the request to be approved. If the plant status is "Plant Evaluation Required" the source may be approved, however the Structural Materials team will need to perform an evaluation before material is fabricated.

1 per 1 Prior to Usage on Project

Material Production

Quality Assurance of Structural Material production facilities.

Material Certification for Project Usage

Facility re-qualification required, Structural Materials to conduct facility evaluation and reissue facility certification. Please contact metals@sha.state.md.us to schedule an evaluation.

Option to be selected only when frequency met for re-evaluation. Select when the status of producer is "Plant Evaluation Required", otherwise indicate that the task is not applicable

1 per 12 Months

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect the stamped supplier's Certification of Compliance listing the materials shipped and submit to the Materials Management Division for materials clearance.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 7 - Qualified Facilities, Cert Review

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 2

Source Level Materials	Specification	Comments
Concrete Epoxy Coating	917.01	
Pre-Formed Fabric Pads	910.02.03	
Steel Reinforcing Bars, Fabricated	908	
Structural Steel Liquid Coating, Manufacturer	912.05	

Plant or Product Qualification

Review of Producer (SM)

Facility Qualification

Facility to be qualified for state projects before it is sourced.

The material producer (in some cases supplier) shall be reviewed by the Structural Material Division prior to the producer being named as a source of supply. Facilities that have not produced for an MD project in one year will need to be re-qualified.

1 per 12 Months

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request required when the producer's status is "Plant Evaluation Required".

Source of Supply Processing

The material producer must be "Qualified for State Projects" and associated to the Source of Supply request properly for the request to be approved. If the plant status is "Plant Evaluation Required" the source may be approved, however the Structural Materials team will need to perform an evaluation before the material is shipped.

1 per 1 Prior to Usage on Project

Material Production

Quality Assurance of Structural Material production facilities.

Material Certification for Project Usage

Facility re-qualification required. Structural Materials to conduct facility evaluation prior to material approval. Contact metals@sha.state.md.us to determine inspection schedule.

Option to be selected only when frequency met for re-evaluation. Select when the status of producer is "Plant Evaluation Required", otherwise indicate that the task is not applicable.

1 per 12 Months

OMT approval of material for shipment, Structural Materials

Material Certification for Project Usage

Submit Material Certification (TC 1.03 w/ test data) to metals@sha.state.md.us for review prior to delivery. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the delivery.

1 per 1 Prior to Usage on Project

Material Quality Assurance Processes

SM Group 7 - Qualified Facilities, Cert Review

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 2 of 2

Submit Material Certification (TC 1.03 w/ test data) and a sample to Structural Materials, contact metals@sha.state.md.us. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the delivery.

Option applicable for Pre-Formed Fabric Pads

1 per 1 Prior to Usage on Project

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 8 - Qualified Facilities, Production Insp

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 1 of 2

Source Level Materials	Specification	Comments
Aluminum Signs	813, 950.08.01	
Bearings, Elastomeric Structural	910.02.01	
Bearings, Structural	910.01	
Bridge Mounted Sign Supports	433	
Expansion Joints in Structures, Complex/Finger	460	
Expansion Joints in Structures, Simple	460	
Fiberglass Scuppers	921.11	
Galvanized Steel Beam Sign Posts	802	
Gray Iron Casting (Scupper, Drain Grate, Inlet)	909.04	
Lighting Structures		
Metal Railing, Bridge Railing	461	
Metal Structures, Bridge Steel	430	
Noise Barriers, Steel Post	455	
Overhead Sign Structures	803	
Signal Structures		
Steel Frame and Cover	909.04	
Steel Wire Reinforcement Fabric, Welded	908.05	

Plant or Product Qualification

Review of Producer (SM)

Facility Qualification

Facility to be qualified for state projects before it is sourced.

The material producer (in some cases supplier) shall be reviewed by the Structural Material Division prior to the producer being named as a source of supply. Facilities that have not produced for an MD project in one year will need to be re-qualified.

1 per 1 Prior to Source Request

Source Approval

Source Submission

Source of Supply Submittal

A name and address of the material sources of supply shall be sent to MMD for review. The producer is the organization that creates the material, the supplier is the one that delivers it to the project.

Delegation of Source of Supply Request required for all submissions.

Source of Supply Processing

The material producer must be Qualified for State Projects and associated to the Source of Supply request properly for the request to be approved.

1 per 1 Prior to Usage on Project

Material Production

Material Quality Assurance Processes

SM Group 8 - Qualified Facilities, Production Insp

Structural Materials and Pavement Markings Division

QA / Frequency Guide, Source Level Material Listing Page 2 of 2

Quality Assurance of Structural Material production facilities.

Material Certification for Project Usage

Facility re-qualification required. Structural Materials to conduct facility evaluation and reissue facility certification.

Option to be selected only when frequency met for re-evaluation. Select when the status of producer is "Plant Evaluation Required", otherwise that the task is not applicable.

1 per 12 Months

OMT approval of material for shipment, Structural Materials

Material Certification for Project Usage

When applicable, all galvanized or painted materials must be inspected in the final coated condition.

The Metals team will inspect the fabrication, all relevant certifications, and may take material samples at the production facility. Please contact metals@sha.state.md.us to determine inspection schedule.

This option is utilized for all safety critical materials and for other materials when re-qualification of the facility is required.

1 per 1 Prior to Usage on Project

Project Construction

Material Verification at Project Site, Structural Materials

Material Verification

On arrival at the project site the Project Engineer shall ensure the material is from the correct source and is fit for usage.

Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.

1 per 1 Delivery to Project

Material Quality Assurance Processes

SM Group 9 - Qualified Facilities, Not Sourced

Structural Materials and Pavement Markings Division

[QA / Frequency Guide, Source Level Material Listing](#) Page 1 of 1

Source Level Materials	Specification	Comments
Epoxy & Polyester Coating Application for Metals	917.02, 917.03	
Epoxy Powder Coating	917.02	
Galvanizing Application for Metals	465	
Galvanizing Material		
Metal Traffic Barrier, Manufacturer	605	
Polyester Powder Coating, Material	917.03	
Steel Reinforcing, Not Fabricated	908	
Structural Steel Liquid Coating, Application	465	
08" Offset Block		
10" Offset Block		
12" Offset Block		

Plant or Product Qualification

Review of Producer (SM)

Facility Qualification

Facility to be qualified for state projects (and re-qualified annually).

Facilities that supply materials in this category must be qualified before the material is used on a state project. Typically are utilized by a separate supplier or fabricator (qualified independently) before shipment to the project site. Therefore these facilities do not need to be specifically sourced to a project.

1 per 12 Months