

***INTRODUCTION TO MARYLAND SHA QUALIFIED LISTS PACKAGE***

***AND***

***OFFICE OF TRAFFIC & SAFETY'S APPROVED PRODUCTS LIST FOR  
TEMPORARY TRAFFIC CONTROL DEVICES & MISCELLANEOUS ITEMS***

These lists are issued to provide sources of materials qualified by the Central Northern Regional Laboratory for use on Maryland State Highway Projects. It is intended primarily as a reference for source of supply approval and does not imply that materials can be used on Maryland SHA projects without regard for normal quality assurance testing and procedures.

Each type of material listed herein has undergone a prescribed procedure for submitting, testing and approval. These procedures are available to product manufacturers upon request.

When a product is approved, it will be added to the appropriate list. Distribution will be made to parties concerned. When you receive an updated list, please discard the old one.

Questions concerning this list should be directed to Stuart E. Jones, Qualified Materials Representative. I can be reached at 410-321-4113 or faxed at 410-321-4108.

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# *List of Qualified Admixtures for Concrete*

## AIR ENTRAINING AGENTS

<u>Product I.D.</u>	<u>Producer</u>	<u>Approved dosage in fluid oz. per 100 lbs. of cement</u>	<u>Approval Date</u>
MBVR	MASTER BUILDERS	¼ - 1 ½	12/10/73
SIKA A.E.A 15	SIKA CHEMICAL CO.	¼ - 1 ½	12/14/73
FX-340	FOX INDUSTRIES	½ - 1 ½	07/14/75
DARAVAIR – M	W.R. GRACE	¼ - 6	04/24/81
MICRO – AIR	MASTER BUILDERS	¼ - 4	03/11/86
MB AE 90	MASTER BUILDERS	¼ - 4	02/23/94
DARAVAIR 1000	W.R. GRACE	¾ - 3	06/10/94
DAREX II AEA	W.R. GRACE	½ - 5	12/15/94
CATEXOL AE 260	AXIM CONCRETE TECHNOLOGY	1 – 6	10/21/96
SIKA A.E.R.	SIKA CHEMICAL CO.	0.5 - 1.5	05/22/97
SIKA AIR	SIKA CHEMICAL CO.	0.5 - 3.0	05/19/00
EUCON AIR 40	EUCLID CHEMICAL CO.	0.25 - 1.5	09/18/00
DARAVAIR AT60	W.R. GRACE	¼ - 3.0	06/07/01
AIR PLUS **	FRITZ-PAKS CORPORATION	PER MANUFACTURER'S RECOMMENDATIONS	07/12/01
SUPER AIR PLUS **			
SIKA AEA-14	SIKA CHEMICAL CORP.	½ - 3.0	02/26/02
CHRYSOAIR R2	CHRYSO INC.	0.25 –15.0	10/26/04

## CHEMICAL ADMIXTURES TYPE A – WATER REDUCING

PLASTOCRETE 161	SIKA CHEMICAL CO.	3 – 5	10/22/73
EUCON WR 75	EUCLID CHEMICAL CO.	2 – 3	04/03/74
FX – 341 – A	FOX INDUSTRIES	3 – 4	02/01/78
POZZOLITH 322 N	MASTER BUILDERS	3 – 7	09/13/79
POLYHEED 997	MASTER BUILDERS	3 – 10	01/21/93
WRDA w/ HYCOL	W.R. GRACE	3 – 6	05/10/94
WRDA – 64	W.R. GRACE	3 – 6	08/01/96
DARACEM – 55	W.R. GRACE	4 – 12	08/01/96
CATEXOL 1000 N	AXIM CONCRETE TECHNOLOGY	2 – 5	10/21/96
CATEXOL 1000 SP-MN	AXIM CONCRETE TECHNOLOGY	12 – 40	05/02/97
WRDA-35	W.R. GRACE	2 – 4	11/14/97
WRDA-79	W.R. GRACE	3 – 4.5	10/20/99
POZZOLITH 200-N	MASTER BUILDERS	3.5 – 4	11/22/99
EUCON HC	EUCLID CHEMICAL CO.	2.5 – 5.0	09/18/00
EUCON NW	EUCLID CHEMICAL CO.	3.0 – 6.0	09/18/00
EUCON X15	EUCLID CHEMICAL CO.	4.0 – 8.0	09/22/00
SIKAMENT MP	SIKA CORPORATION	4.0 – 12.0	04/11/01
SIKAMENT 2000	SIKA CORPORATION	3 – 8	02/26/02
ADVA 140	W.R. GRACE	4.0 – 12.0	11/10/03
CHRYSOPLAST 850	CHRYSO INC.	7.6 – 23.0	10/26/04
VISCOCRETE 2100	SIKA CORPORATION	1.0 – 3.0	02/03/05
PS-1466	MASTER BUILDERS	2.0 – 4.0	08/18/05
GLENIUM 3030NS	MASTER BUILDERS	2.0 – 6.0	01/31/06

**\*\* Products for Addition of Air on the Jobsite “ONLY”. These are pre-packaged products.**

## *List of Qualified Admixtures for Concrete*

### TYPE C - ACCELERATING, NON CHLORIDE

<u>Product I.D.</u>	<u>Producer</u>	<u>Approved dosage in fluid oz. per 100 lbs. Cement</u>	<u>Approval Date</u>
POZZOLITH NC 534	MASTER BUILDERS	27 – 125	05/01/95
POZZUTEC 20	MASTER BUILDERS	20 – 60	05/01/95
POLARSET	W.R. GRACE	30 – 60	05/01/95
PLASTOCRETE 161 FL	SIKA CHEMICAL CO.	24 – 64	05/09/95
SIKA RAPID-1	SIKA CHEMICAL CO.	20 – 48	03/27/97
CATEXOL 2000 R.H.E.	AXIM CONCRETE TECHNOLOGY	16 – 64	05/02/97
DARASET 200	W.R. GRACE	30 – 60	05/24/99
LUBRICON NCA	W.R. GRACE	@ 30oz/100wt.	05/24/99
SIKASET NC	SIKA CHEMICAL CO.	30 – 45	03/12/02
POZZUTEC 20+	MASTER BUILDERS	27 – 60 Subfreezing 60 – 90	08/22/02

### TYPE C - ACCELERATING, NON CHLORIDE DOSAGE RATES FOR USE IN MODIFIED MIX 6 (PATCHING MIX) ONLY

POZZILITH NC 534	MASTER BUILDERS	10 – 125	05/01/95
POZZUTEC 20	MASTER BUILDERS	10 – 60	05/01/95
POLARSET	W.R. GRACE	10 – 60	05/01/95
PLASTOCRETE 161 FL	SIKA CHEMICAL CO.	10 – 64	05/09/95
SIKA RAPID-1	SIKA CHEMICAL CO.	10 - 48	03/27/97
CATEXOL 2000 R.H.E.	AXIM CONCRETE TECHNOLOGY	10 – 64	05/02/97
DARASET 200	W.R. GRACE	12 – 60	05/24/99
LUBRICON NCA	W.R. GRACE	15 – 30	05/24/99
POZZUTEC 20+	MASTER BUILDERS	10 – 60 Subfreezing 60 – 90	08/22/02

### TYPE C - ACCELERATING, CHLORIDE \*

DARACCEL	W.R. GRACE	16 – 60	12/11/95
POZZOLITH 122 HE	MASTER BUILDERS	17 – 64	12/11/95

### TYPE D - WATER REDUCING AND RETARDING

PLASTIMENT	SIKA CHEMICAL CO.	2 – 4	01/22/74
EUCON RETARDER	EUCLID CHEMICAL CO.	3 – 5	03/06/74
DARATARD 17	W.R. GRACE	2 – 6	05/02/74
FX - 343 DP	FOX INDUSTRIES	3 – 4	05/20/77
POZZOLITH 200 N	MASTER BUILDERS	5 – 6	09/29/99
POZZOLITH 122 R	MASTER BUILDERS	3 – 5	03/19/84
DELVO STABILIZER	MASTER BUILDERS	3 – 12	12/07/93
CATEXOL 1000 R	AXIM CONCRETE TECHNOLOGY	3 – 4	10/21/96
WRDA – 35	W.R. GRACE	4 – 8	11/14/97
POZZOLITH 100XR	MASTER BUILDERS	2 – 4	03/02/98
WRDA-79	W.R.GRACE	5 – 10	10/20/99
EUCON NR	EUCLID CHEMICAL CO.	3 – 10	09/18/00
EUCON HC	EUCLID CHEMICAL CO.	5 – 8	09/18/00
RECOVER	W.R. GRACE	2.5 min.	08/22/01

**\* MAY ONLY BE USED IN CONJUNCTION WITH 7 HOUR PATCH MIX**

## *List of Qualified Admixtures for Concrete*

### **TYPE F - WATER REDUCING HIGH RANGE**

<b><u>Product I.D.</u></b>	<b><u>Producer</u></b>	<b><u>Approved dosage in fluid oz. per 100 lbs. Cement</u></b>	<b><u>Approval Date</u></b>
MIGHTY 150	BOREMCO SPEC. CHEM.	11.9 – 16	03/15/77
SIKAMENT 300	SIKA CHEMICAL CO.	13.5 – 24	06/20/77
FX – 334	FOX INDUSTRIES	12.0 min.	08/14/78
DARACEM 19	W.R. GRACE	16 – 40	02/04/82
ADVAFLOW	W.R. GRACE	5.0 – 10.0	10/24/97
RHEOBUILD 1000	MASTER BUILDERS	10 – 25	03/10/94
SIKAMENT 86	SIKA CORPORATION	12 – 20	05/23/97
CATEXOL 1000 SP-MN	AXIM CONCRETE TECHNOLOGY	14 – 40	06/07/99
GLENIUM 3000 NS	MASTER BUILDERS	6.0 – 12.0	06/07/00
EUCON SP	EUCLID CHEMICAL CO.	9.0 – 16.0	01/22/01
SUPERFLUX 2000 PC	AXIM CONCRETE TECHNOLOGY	3 – 10	01/23/02
GLENIUM 3030 NS	MASTER BUILDERS	7.5 – 18.0	09/25/02
VISCOCRETE 6100	SIKA CORPORATION	6.0 – 12.0	04/22/03
ADVA 140	W.R. GRACE	18.0 – 24.0	07/16/03
ADVA 170	W.R. GRACE	4.0 – 9.0	03/10/04
ADVACAST 530	W.R. GRACE	3.0 – 10.0	04/05/04
GLENIUM 3400 NV	MASTER BUILDERS	5.5 – 12.0	10/26/04
VISCOCRETE 2100	SIKA CORPORATION	4.0 – 16.0	02/03/05
VISCOCRETE 4100	SIKA CORPORATION	4.0 – 12.0	04/01/05
PS-1466	MASTER BUILDERS	5.3 – 10.0	08/18/05

### **TYPE G – WATER REDUCING HIGH RANGE AND RETARDING**

MIGHTY RDI	BOREMCO SPEC. CHEM.	7.5 – 10.5	01/05/79
FX – 335	FOX INDUSTRIES	8.0 min.	04/07/80
DARACEM – 100	W.R. GRACE	12 – 40	12/27/84
POZZOLITH 440N	MASTER BUILDERS	15.0 min.	08/18/92
EUCON RD-1	EUCLID CHEMICAL CO.	9.0 – 20.0	01/22/01
CHRYSOFLUID OPTIMA 203	CHRYSO INC.	11.0 – 46.0	10/26/04

## *List of Qualified Asphalt Release Agents*

<u>Date</u>	<u>Product I.D.</u>	<u>Producer</u>	<u>Approval</u>
	NCC 268 RELEASE PLUS	NCC INCORPORATED	03/30/90
	ENVIRO/SLIP	DUBOIS CHEMICAL COMPANY	03/30/90
	ASPHALT RELEASE	SYNDET PRODUCTS	05/09/90
	SLIDE	SYNDET PRODUCTS	05/09/90
	ZEP R – 5274	ZEP MANUFACTURING	05/09/90
	ZEP 158	ZEP MANUFACTURING	05/09/90
	KWIK RELEASE	PRESTO CHEMICAL COMPANY	05/09/90
	AFCO 5508	MARYLAND CHEMICAL COMPANY	05/29/90
	RELEEZ	ALZO, INCORPORATED	06/01/90
	BIG RED	TEXAS REFINERY CORPORATION	06/05/90
	SLIPEAZE SB	ROCHESTER / MIDLAND	07/09/90
	POLYSLI	DUBOIS CHEMICAL COMPANY	05/10/91
	SAFETY SLIDER	SAFETY FIRST CHEMICALS	12/04/91
	ZEP R – 6690	ZEP MANUFACTURING COMPANY	12/04/91
	BIO – CREAM	PRESTO CHEMICAL COMPANY	02/28/92
	L – 901	PURITAN / CHURCHILL	02/28/92
	CHEMSEARCH CONCENTRATE	NATIONAL CHEMSEARCH	04/21/92
	FO RELEASE	FINE ORGANIC CORPORATION	04/21/92
	ENVIRO RELEASE SLIP	R.U.S. ENTERPRISES	04/21/92
	TBRA 7191	ARR - MAZ PRODUCTS	05/27/92
	SOAP SLIP	D & A, INC.	08/31/92
	SLIDE – EZE	DIVERSEY CORPORATION	04/29/93
	NO – PHALT II	METAL LUBRICANTS COMPANY	12/22/93
	AI – 6235	SPACE CHEMICAL INC.	03/10/94
	AR – 92	EMULSO CORPORATION	04/25/94
	SMA-SLIP	D & A, INC.	07/11/94
	DMX – 7	CUSTOM PRODUCTS RESEARCH, INC.	10/24/94
	SUPER FOAM 92	NCC, INC.	10/24/94
	VANI-SOL	RECKITT AND COLEMAN, INC.	02/03/95
	QUICK RELEASE 2001	AMERICAN LUBRICANTS COMPANY	02/03/95
	TBRA STA	ARR - MAZ PRODUCTS, INC.	02/03/95
	TECLON – 50	TEC - TEAM INDUSTRIES, INC.	02/03/95
	DIVER – SLIP	DIVERSEY CORPORATION	03/20/95
	SP-SLIP	D & A INC.	03/20/95
	AFR	WILSON SUPPLY CO., INC.	10/03/95
	SLIPEAZE NATURAL	ROCHESTER MIDLAND	01/18/96
	NCC – 96 PHALT FREE	NCC INCORPORATED	02/21/96
	SYN-COAT	PRESTO CHEMICALS	03/21/97
	ASPHALT RELEASE ND	CURTIS/GLEN CHEMICAL CORP.	10/08/98
	TEC-SHIELD	TEC-TEAM INDUSTRIES	10/08/98
	RELEASE-EASE	SHARE CORPORATION	02/10/99
	CHEMSTATION 1475 Mid Atlantic	CHEMSTATION	05/24/99
	CHEMEDGE BRAND SLIDE	CHEMSTATION	09/27/99
	22-133A ASPHALT RELEASE	THE BULLEN COMPANY INCORPORATED	05/17/00
	SLIDE-DL	CHEMSTATION	06/22/00
	ALL ASPHALT RELEASE	MISCO PRODUCTS	10/25/00
	SLIP “n” SLIDE	DRUMMOND AMERICAN CORP.	11/24/00
	FREEZE FREE	ZEP MANUFACTURING	04/17/01
	V-SLIP	D&A INCORPORATED	07/24/01
	5111-Q	QUALI-CHEM INCORPORATED	08/15/01
	5112-Q	QUALI-CHEM INCORPORATED	08/15/01

## *List of Qualified Asphalt Release Agents*

<u>Date</u>	<u>Product I.D.</u>	<u>Producer</u>	<u>Approval</u>
	NS-115	IDEAL CHEMICAL PRODUCTS	05/10/02
	ESE-100	DAYCON PRODUCTS CO.	06/17/02
	SPX-7	COMPOUND TECHNOLOGIES INC.	12/06/02
	#570154	FLAVORCHEM/ORCHIDIA	03/28/03
	SOY-SLIP	CANTOL INCORPORATED	06/16/03
	AR-2000	FRANKLYNN INDUSTRIES	07/17/03
	AR-2217	CLEAN EDGE PRODUCTS	07/20/04
	STOP-STIX	STOP STIX! INC.	05/16/05
	AR-3600	BIO-SPAN TECHNOLOGIES	08/08/05
	AR-2660	CHEMSTATION INC.	08/31/05

# *List of Qualified Epoxy Coatings for Deformed Steel Reinforcing Bars*

## **Product I.D.**

SCOTCHKOTE 215 GREEN  
CORFLEX CF 4650 (GREEN)  
CORVEL GREEN 10 – 6071  
NAP – GUARD 7 – 2709  
SCHOTCHKOTE 413  
AKZO 500607  
GREEN BAR  
POWDAX E – 90  
AKZO 500620  
CORVEL GREEN 10-6095  
NAP-GUARD 7-2719

## **Producer**

MINNESOTA MINING AND MANUFACTURING CO.  
CARLONIE / FERRO COMPANY  
MORTON INTERNATIONAL INCORPORATED  
DUPONT POWDER COATINGS  
3M ELECTRICAL SPECIALTIES DIVISION  
AKZO NOBEL  
LILLY INDUSTRIES, INC.  
SEIBERT POWDER COATINGS  
AKZO NOBEL  
MORTON INTERNATIONAL INCORPORATED  
DUPONT POWDER COATINGS



## *List of Qualified Form Release Compounds*

<u>Product I.D</u>	<u>Producer</u>	<u>Approval Date</u>
ARCAL NO HOLD N	ARCAL CHEMICALS, INCORPORATED	01/27/75
FORM OIL SRC	FUCHS METAL LUBRICANTS CO.	04/18/75
WATER SEAL E.A.	THOMPSON COMPANY INCORPORATED	04/18/75
MAGIC – KOTE	SYMONS CORPORATION	07/02/75
DUOGARD	W.R. MEADOWS	09/24/76
FORMSHIELD	W.R. GRACE	04/20/77
FORM KOTE VOC	KAUFMAN PRODUCTS, INC.	08/31/04
CONSPEC REACT – S	MARKETING MANUFACTURING CO.	04/25/83
DRYDEN C	DRYDEN OIL COMPANY	05/16/83
CRETE LEASE 727	CRESSET CHEMICALS COMPANY	07/14/84
PROTEX FORM OIL	PROTEX INDUSTRIES, INC.	09/19/84
DRYDEN CD	DRYDEN OIL COMPANY	12/18/84
CERTIVEX FR	VEXCON CHEMICALS, INC.	07/31/85
CONCRETE RELEASE OIL	DRYDEN OIL COMPANY	08/12/86
FORM REALEASE NO.1	MURPHY PHOENIX COMPANY	12/11/86
FORM RELEASE 85 – 736	MURPHY PHOENIX COMPANY	12/11/86
FORMSHIELD	A.C. HORN INCORPORATED	12/11/96
CRETE LEASE 880	CRESSET CHEMICAL COMPANY	05/11/87
THRIFT KOTE FORM OIL	SYMONS CORPORATION	04/26/88
833 RELEASE AGENT	MASTER BUILDERS	05/26/88
SEALTIGHT DUOGARD	W.R. MEADOWS	01/08/90
BURKE RELAESE #1	BURKE COMPANY	05/01/91
ECONOMY RELEASE	SYMONS CORPORATION	06/12/90
CLEAN STRIP ULTRA J – 3	DAYTON SUPERIOR COMPANY	07/13/92
CLEAN STRIP C & MJ - 1 – A	DAYTON SUPERIOR COMPANY	07/13/92
CLEAN STRIP J – 1	DAYTON SUPERIOR COMPANY	07/13/92
FORM RELEASE GOLD	TRIDEN CONSRUCTION SUPPLY	12/14/95
FORM KOTE 021 E	KAUFMAN PRODUCTS	03/07/96
KLEENFORM 89W	FUCHS METAL LUBRICANTS CO.	08/13/96
CITGO CONCRETE FORM OIL	CARROL INDEPENDENT OIL CO.	05/20/98
CHEVRON FORM OIL ISO 22	CHEVRON PRODUCTS COMPANY	07/08/98
FORM FREE VOC	CONSPEC MARKETING	06/07/00
NOX-CRETE	KINSMAN CORP./NOX-CRETE	09/27/00
BRAD PENN / PENN-GRADE ***	AMERICAN REFINING GROUP	05/30/02

\*\*\* Because of chemical reactions discoloration takes 24-48 hours to disappear.

# *List of Qualified Styrene-Butadiene Latex Emulsion Admixtures for PCC*

## **Product I.D.**

MODIFIER A  
FX – 337  
TYLAC 97 - 314  
STYROFAN 1186

## **Producer**

DOW CHEMICAL COMPANY  
FOX INDUSTRIES  
REICHOLD CHEMICALS  
BASF CORPORATION

## **Approval Date**

04/09/79  
07/06/79  
04/20/81  
10/23/03

## *List of Qualified Rapid Hardening Cementitious Material*

<u>PRODUCT I.D.</u>	<u>TYPE 1 SLOW</u>	<u>TYPE 2 RAPID</u>	<u>TYPE 3 V. RAPID</u>	<u>CLASS 1 BELOW 50</u>	<u>CLASS 2 50-90</u>	<u>CLASS 3 ABOVE 90</u>
EMACO 415	X				X	
RAPID SET CEMENT			X		X	
FX - 928		X	X		X	X
IFSCEM 110			X		X	
FX - 928 W	X			X		
MAGNA 100			X		X	X
THOROC 10-60			X		X	
5 STAR		X			X	
BONSAL VR		X			X	
EUCO MP			X		X	
SYMONS DOT		X			X	
DAY-CHEM PERMA PATCH	X	X			X	
SPEEDCRETE 2028	X				X	
SET 45		X			X	
SIKASET ROADWAY PATCH		X			X	
POWERSET 120			X		X	
EXPRESS REPAIR MORTAR		X	X		X	X
EXPRESS REPAIR MORTAR	X	X		X		
QUIKRETE RAP.ROAD REPAIR		X			X	
SIKAQUICK2500			X		X	
FUTURA 15			X		X	
EUCO-SPEED	X				X	
VERSASPEED			X		X	

<u>PRODUCT I.D.</u>	<u>MAX LIQUID GAL/WT PATCH MAT.</u>	<u>INITIAL SET</u>	<u>COMP. STRENGTH 2000 PSI + @...HOURS</u>	<u>APPROVAL DATE</u>
EMACO 415	0.50/4.20 LBS.	19 MIN.	2830...6 HRS.	11/92
RAP SET CEMENT	0.75/6.25 LBS.	12 MIN.	4320...2 HRS.	12/92
FX - 928	0.75/6.25 LBS.	24 MIN.	3230...2 HRS.	03/93
FX - 928	0.82/6.85 LBS.	36 MIN.	2960...4 HRS.	03/93
IFSCEM 110	0.875/7.29LBS.	16 MIN.	3970...2 HRS.	07/01
FX - 928 W	0.92/7.50 LBS.	24 MIN.	2800...2 HRS.	12/93
MAGNA 100	0.50/4.20 LBS.	14 MIN.	3710...2 HRS.	02/94
THOROC 10-60	0.69/5.72 LBS.	19 MIN.	3900...2 HRS.	04/94
5 STAR	0.75/6.25 LBS.	12 MIN.	2800...2 HRS.	03/95
BONSAL VR	0.72/6.00 LBS.	13 MIN.	6050...2 HRS.	05/95
EUCO MP	0.50/4.17 LBS.	15.5 MIN.	5250...2 HRS.	11/96
SYMONS DOT	0.87/7.29 LBS.	20 MIN.	2950...2 HRS.	11/96
DAY-CHEM PERMA-PATCH	0.87/7.29 LBS.	38 MIN.	2780.. 3.5 HRS.	04/98
SPEEDCRETE 2028	0.62/5.21 LBS.	17.5 MIN.	3680...2 HRS.	07/98
SET 45	0.50/4.17 LBS.	17.0 MIN.	7010...2 HRS.	09/98
SIKASET ROADWAY PATCH	1.125/9.37LBS.	64.0 MIN.	2340...2 HRS.	10/98
POWERSET 120	0.876/7.25LBS.	23.0 MIN.	2630...2 HRS.	09/02
EXPRESS REPAIR MORTAR	0.75/6.25LBS.	25.0 MIN.	3030...2 HRS.	10/28/02
QUIKRETE RAP.ROADREPAIR	0.78/6.50LBS.	10.0 MIN.	2160...2 HRS.	04/16/03
SIKAQUICK2500	0.688/5.73LBS.	10.0 MIN.	3810...2 HRS.	04/27/04
FUTURA 15	0.66/5.5LBS.	21.5 MIN.	3200...2 HRS.	02/17/05
EUCO-SPEED	0.75/6.25LBS.	14.5 MIN.	2350...6 HRS.	07/26/05
VERSASPEED	0.469/3.91LBS.	15.0 MIN.	2920...2HRS.	09/28/05

## *List of Qualified White Pigmented Curing Compounds*

<u>Product I.D.</u>	<u>Producer</u>	<u>Formula designation</u>	<u>Prequal. Sample wt. and field control range LB/gal</u>	<u>Approval Date</u>
WET	HUNT PROCESS CORPORATION	WET (W)	8.6 ± 0.3	04/30/81
SCOTCH – KURE	OLD NORTH MANUFACTURING COMPANY, INC.	SK - W (R)	9.0 ± 0.3	02/23/82
ENVIOCURE WHITE	VEXCON CHEMICALS, INCORPORATED	1000 (R)	9.1 ± 0.3	03/15/85
HORNCURE WP	A.C. HORN INCORPORATED	2803 - (R)	8.5 ± 0.3	06/23/89
D.S.S.C.C. CLEAR RESIN CURE	DAYTON SUPERIOR	(R)	8.7 ± 0.3	09/05/90
SAFE – CURE WHITE 1000	CHEMASTERS	94 - 009 (W)	8.4 ± 0.3	03/28/94
THINFILM	KAUFMAN PRODUCTS, INC.	445 - (W) 456 - (R)	8.5 ± 0.3 9.0 ± 0.3	01/03/95 05/27/97
SEALTIGHT	W.R. MEADOWS OF PENN., INC.	1645 WHITE (W) 2230 (R)	8.3 ± 0.3 8.4 ± 0.3	06/12/96 06/18/97
D.S.S.C.C. WHITE WAX CURE	DAYTON SUPERIOR	(W)	8.4 ± 0.3	11/12/96

**(W) = Wax Base**

**(R) = Resin Base**

## *List of Qualified Removable Preformed Pavement Marking Material for Maintenance of Traffic*

When preformed pavement marking materials are used for temporary delineation of the final surface course, only those identified on the list below may be used on the pavement surfaces noted.

Below the final surface course, these or any other preformed pavement marking material may be used at the discretion of the Engineer.

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
620 SSM-95-18-OR	3M	WHITE	HMA, PCC	11/97
621 SSM-95-19-OR	3M	YELLOW	HMA, PCC	11/97
750 PMM-00-PA-5**	3M	WHITE	HMA,PCC	07/01
751 PMM-00-PA-6**	3M	YELLOW	HMA,PCC	07/01
ATM 200	ADV. TRA.			
STR-98-508-TX	MARK.	YELLOW	HMA,PCC	03/01
STR-98-507-TX		WHITE		03/01
STR-96-184-PA **		WHITE	HMA	06/99
STR-96-185-PA **		YELLOW		06/99
BRITE – LINE SERIES 100	BRITE LINE	WHITE & YELLOW	HMA	02/98
STR-96-139-PA	TECH.			
STR-96-140-PA				
DIRECTOR – 2	SWARCO	WHITE & YELLOW	HMA, PCC	02/98
STR-96-127-PA				
STR-96-128-PA				
GRT HIGHWAY MARKING	BILTRITE CORP.			
PMM 99 MS-5	(GRT HIGHWAY )	WHITE	HMA & PCC	01/01
PMM 99 MS-6		YELLOW	HMA & PCC	01/01
TRELLEBORG	TRELLEBORG			
PMM 00 PA 187		WHITE	HMA & PCC	05/01
PMM 00 PA 188		YELLOW	HMA & PCC	05/01

HMA - HOT MIX ASPHALT

PCC – PORTLAND CEMENT CONCRETE

MARYLAND CURRENTLY RECOGNIZES ALL HMA MIXTURES AS A SINGLE CATEGORY BUT, RESERVES THE RIGHT TO WITHDRAW A MATERIAL ( REMOVABLE PREFORMED PAVEMENT MARKING MATERIAL FOR MAINTENANCE OF TRAFFIC ) FROM THIS LIST WHEN UNSATISFACTORY PERFORMANCE IS EXHIBITED.

All tapes shall be applied according to the Contract specifications and the Manufacturer’s recommendations.

\*\* This is a tentative approval.

## ***List of Qualified Permanent Preformed Pavement Marking Material***

When preformed pavement marking materials are used for delineation of the final surface course, only those identified on the list below may be used on the pavement surfaces noted.

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
STAMARK 380 STR-96-160-PA	3M	WHITE	HMA, PCC	02/92
		CONTRAST/WHITE***		07/05
STAMARK 381 STR-96-161-PA	3M	YELLOW	HMA, PCC	02/92
		CONTRAST/YELLOW***		07/05
STAMARK STR-92-420-MD **	3M	WHITE	HMA, PCC	02/92
STAMARK STR-96-440-MD **	3M	YELLOW	PCC	03/96
STAMARK STR-92-5730-MD **	3M	WHITE	HMA, PCC	02/92
STAMARK STR-92-5731-MD **	3M	YELLOW	HMA, PCC	02/92
1000 STR-96-137-PA	BRITE - LINE TECH.	WHITE	HMA, PCC	02/92
1000 STR-96-138-PA	BRITE - LINE TECH.	YELLOW	HMA, PCC	02/92
300 DURABLE STR-96-176-PA	ADV. TRA. MARK.	WHITE	HMA, PCC	03/96
300 DURABLE STR-96-177-PA	ADV. TRA. MARK.	YELLOW	HMA, PCC	03/96
TEXT. STR-96-135-PA XRP ***	BRITE -LINE	WHITE	HMA, PCC	10/98
TEXT. STR-96-136-PA XRP	BRITE-LINE	YELLOW	HMA, PCC	10/98
DIR. 60 STR-92-VPT-W-MD **	SWARCO	WHITE	HMA, PCC	02/92
DIR. 60 STR-92-VPT-Y-MD **	SWARCO	YELLOW	HMA, PCC	02/92
* 820 wet tape PMM2000 PA-1	3M	WHITE	HMA/PCC	01/03
* 821 wet tape PMM2000 PA-2	3M	YELLOW	HMA/PCC	01/03

Maryland currently recognizes all hma mixtures as a single category but, reserves the right to withdraw a material (PERMANENT PREFORMED PAVEMENT MARKING MATERIAL ) from this list when unsatisfactory performance is exhibited.

All tapes shall be applied according to the Contract specifications and the Manufacturer's recommendations.

**HMA - Hot mix asphalt**

**PCC - Portland cement concrete**

\*\* Tentative approval pending satisfactory results from the Northern NTPEP test deck.

\*\*\*Black edge portion of contrast tape color has been tested and approved. See Blackout QPL Section 104.11 of OOTS section of this QPL.

### **List of Qualified Permanent Pavement Marking Material (POLYUREA)**

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
HPS-5 PMM2000PA-84*	IPS INC.	WHITE	HMA, PCC	05/02
HPS-5 PMM2000PA-85*	IPS INC.	YELLOW	HMA, PCC	05/02

### **List of Qualified Permanent Pavement Marking Material (ModifiedUrethane)**

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
HPS-4 PMM2000PA-86*	IPS INC.	WHITE	HMA, PCC	07/02
HPS-4 PMM2000PA-87*	IPS INC.	YELLOW	HMA, PCC	07/02

- \* Tentative approval pending satisfactory results from placement in Maryland.

## *List of Qualified Permanent Preformed Pavement Marking In-laid Material*

When in-laid pre-formed pavement marking materials are used for the delineation of the final surface course, only those identified on the list below may be used on the pavement surfaces noted.

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
STAMARK 380 STR-96-160-PA	3M	WHITE	HMA	02/92
STAMARK 381 STR-96-161-PA	3M	YELLOW	HMA	02/92

Maryland currently recognizes all HMA mixtures as a single category but, reserves the right to withdraw a material (**IN-LAID**) PERMANENT PREFORMED PAVEMENT MARKING MATERIAL from this list when unsatisfactory performance is exhibited.

**All tapes shall be applied according to the Contract specifications and the Manufacturer's recommendations.**

**HMA = Hot Mix Asphalt**

# *List of Qualified Emulsion Cold Applied Dampproofing Agents*

<u>Producer I.D.</u>	<u>Producer</u>	<u>Approval Date</u>
SEALMASTIC	W.R. MEADOWS	12/14/95
HYDROCIDE	SONNEBORN CHEMICAL CO.	12/14/95
KARNAK #220 AF	KARNAK CHEMTREX INC.	12/29/95



# *List of Qualified Non-shrink Cementitious Grout*

## **Producer I.D.**

IPATOP  
FX 228  
EUCO N - S GROUT  
SURE – GROUT NON – SHRINK  
MULTI – PURPOSE N - S GROUT  
PERMAGROUT N - S GROUT  
CRYSTEX N - S GROUT  
SIKA GROUT 212 NON – SHRINK  
CERTI – GROUT  
RAPID SET CEMENT ALL N – S  
CONSTRUCTION-GROUT  
NBEC  
CONSET GROUT  
PRO-GROUT 100  
CG-200-PC  
1107ADVANTAGE GROUT  
PRECISION GROUT NS-GROUT  
PREMIUM GROUT NS-GROUT  
BONSAL C-1107 N-S GROUT  
ULTI-GROUT N-S GROUT  
COMMERCIAL GRADE FAST SET N-S GROUT

## **Producers**

IPA SYSTEMS INCORPORATED  
FOX INDUSTRIES  
EUCLID CHEMICAL  
KAUFMAN PRODUCTS  
SYMONS CORPORATION  
NATIONAL PERMACRETE COMPANY  
L & M CONSTRUCTION CHEMICALS INC.  
SIKA CORPORATION  
VEXCON CHEMICALS INC.  
CTS CEMENT MANUFACTURING  
MASTER BUILDERS TECHNOLOGIES  
5 STAR PRODUCTS INCORPORATED  
CHEMASTERS  
C.G.M. INCORPORATED  
HILTI CORPORATION  
DAYTON SUPERIOR  
QUIKRETE COMPANIES  
PRE-BLEND PRODUCTS, INC.  
BONSAL AMERICAN  
HEARTLAND CEMENT SALES COMPANY  
QUIKRETE COMPANIES

## *List of Qualified Clear or Translucent Curing Compounds*

**Producer I.D.**

THINFILM 420  
SAFE – CURE  
SEALTIGHT 1130  
D.S.S.C.C. CLEAR RESIN CURE  
ENVIO-CURE

**Producer**

KAUFMAN PRODUCTS INCORPORATED  
CHEMASTERS  
W.R. MEADOWS INC.  
DAYTON SUPERIOR  
VEXCON CHEMICALS

**NOTE:** Certi-Vex RC can continue being used until supplies are empty.

## *List of Qualified Cure & Seal Compounds for “Architectural Colored Concrete”*

<b><u>Producer I.D.</u></b>	<b><u>Producer</u></b>	<b><u>Date Approved</u></b>
STAR SEAL 1315	VEXCON CHEMICALS	12/06/00

## *List of Qualified Loop Sealants*

<b><u>Producer I.D.</u></b>	<b><u>Producer</u></b>	<b><u>1 or 2 Part</u></b>
MAGNALOOP II	MAGNOLIA PLASTICS	2
3M LOOP SEALANT	3M CORPORATION	1
SUPER FLEX EPOXY (E-7091/E-7092)	BONDO	2
FX 592	FOX INDUSTRIES	2
Q-SEAL 290S	CHEMQUE INC.	1

# *Maryland State Highway Administration Type A Soil Stabilization Matting for Channels (Velocity Less than 5.0 f.p.s.) Approved Suppliers*

## Product I.D.

## Supplier / Address

CURLEX TYPE II  
CURLEX 1 (73 GREEN NET 8"X90'2" STITCHED)

AMERICAN EXCELSIOR COMPANY  
P.O. BOX 5067  
ARLINGTON, TX. 76011

DEKOWE 700  
DEKOWE 900

BELTON INDUSTRIES  
HAMBRY ROAD  
BELTON, S.C. 29627

ECS EXCELSIOR EROSION CNTRL. MAT.  
ECS STANDARD STRAW MAT (\*)

EROSION CNTRL SYSTEM, INC.  
9015 ENERGY LANE  
NORTHPORT, AL 35476

NORTH AMERICAN GREEN SC - 150  
NORTH AMERICAN GREEN C - 125  
NORTH AMERICAN GREEN S - 75

NORTH AMERICAN GREEN INC.  
14649 HIGHWAY 41 NORTH  
EVANSVILLE, IN. 47711

X - CEL PERMAT 100 CEL REGULAR  
X - CEL SUPERIOR  
X - CEL REGULAR

WESTERN EXCELSIOR CORPORATION  
901 GRAND AVENUE, P.O. BOX 659  
MANCOS, CO 81328

FUTERRA

CONWED FIBERS  
219 SIMPSON STREET  
CONOVER, NC 28613

WINTERS EXCELSIOR STANDARD

WINTERS EXCELSIOR, INC.  
P.O. BOX 39 HIGHWAY 21  
MCWILLIAMS, AL 36753

JUTE MESH (\*)

LUDLOW MANUFACTURING & SALES  
NEEDHAM HEIGHTS 94, MA.

SOIL SAVER HEAVY JUTE MESH (\*)

JIM WALLS COMPANY  
COMMERCE PLAZA, SUITE 109  
12820 HILLCREST ROAD  
DALLAS, TX. 75230

BONTERRA SI & CS2

BONTERRA AMERICA, INC.  
355 W. CHESTNUT STREET  
MOSCOW, IDAHO 83832

WS072

GREENFIX AMERICA  
604 E. MEAD ROAD  
BRAWLEY, CA 92227  
EAST COAST EROSION CONTROL  
BLANKETS LLC  
443 BRICKER ROAD  
BERNVILLE, PA 19506

ECSC-2  
ECS-1  
ECS-2  
ECX-1  
ECC-2

*(\*) Use limited to Channels with a vertical grade less than 2% grade if mat is placed over bare earth. If mat is installed over straw mulching, there are no restrictions.*

**Under no circumstances shall Quick Break Down netting be used on any SHA project. Certification of the netting may be required.**

**Product I.D.**

JUTE MESH (\*)

ANTI – WASH / GEOJUTE (\*)

JUTE MESH (\*)

JUTE MESH (\*)

VERDYOL EXCELSIOR HIGH VEL.  
VERDYOL EXCELSIOR STANDARD**Supplier / Address**B & M PACKAGING CO., INC. 11515  
GRANITE STREET 28273  
P.O. BOX 411007  
CHARLOTTE, N.C. 28241 – 1007BELTON INDUSTRIES  
8613 ROSEWELL ROAD, SUITE 200  
ATLANTA, GA. 30350BEMIS BROTHS BAG CO.  
ST. LOUIS, MO.BELTON BAGGING CO.  
BELTON, S.C.VERDYOL, ALABAMA  
P.O. BOX 605  
105 MILES PKWY  
PELL CITY, AL. 35125***(\*)Use limited to Channels with a vertical grade less than 2% grade if mat is placed over bare earth. If mat is installed over straw mulching, there are no restrictions.  
SLOPES OF 3:1 OR FLATTER*****Producer I.D.**NORTH AMERICAN GREEN S – 75, C-125  
NORTH AMERICAN GREEN S – 150  
NORTH AMERICAN GREENVERDYOL ERO - MAT HIGH VEL.  
VERDYOL ERO-MAT STANDARDX - CEL REGULAR  
X - CEL SUPERIOR  
SS2 - XCEL STRAW BLANKET (\*)  
X – CEL SR-1  
CURLEX TYPE II

BONTERRA S1 &amp; CS2

FUTERRA

WINTERS EXCELSIOR STANDARD

ECS STANDARD STRAW MAT

WS072

ECS-2  
ECX-1  
ECS-1**Supplier / Address**NORTH AMERICAN GREEN INC.  
14649 HIGHWAY 41 NORTH  
EVANSVILLE, IN. 47711VERDYOL, ALABAMA  
105 MILES PARKWAY  
PELL CITY, AL. 35125WESTERN EXCELSIOR CORPORATIN  
901 GRAND AVENUE P.O. BOX 659  
MANCOS, CO 81328AMERICAN EXCELSIOR COMPANY  
P.O. BOX 5067  
ALINGTON, TX. 76011BONTERRA AMERICA  
355 W. CHESTNUT STREET  
MOSCOW, IDAHO 83832CONWEB FIBERS  
219 SIMPSON STREET  
CONOVER, NC 28613WINTERS EXCELSIOR, INC.  
P.O. BOX 39 HIGHWAY 21  
McWILLIAMS, AL 36753EROSION CONTROL SYSTEMS, INC.  
9015 ENERGY LANE  
NORTHPORT, AL 35476  
GREENFIX AMERICA  
604 E. MEAD RAOD  
BRAWLEY, CA 92227  
EAST COAST EROSION CONTROL BLANKETS LLC  
443 BRICKER ROAD  
BERNVILLE, PA 19506

# SLOPES STEEPER THAN 3:1

<u>Producer</u>	<u>Supplier / Address</u>
CURLEX TYPE II	AMERICAN EXCELSIOR CO. ARLINGTON, TX. 76011
X - CEL REGULAR X - CEL SUPERIOR	WESTERN EXCELSIOR CORPORATIN 901 GRAND AVENUE P.O. BOX 659 MANCOS, CO 81328
NORTH AMERICAN GREEN S – 150 NORTH AMERICAN GREEN SC – 150	NORTH AMERICAN GREEN 14649 HIGHWAY 41 NORTH EVANSVILLE, IN. 47711
VERDYOL ERO - MAT HIGH VEL. VERDYOL EXCELSIOR HIGH VEL.	VERDYOL ALABAMA, INC. 105 MILES PKWY PELL CITY, AL. 35125
ECS-2 & ECSC-2 ECC-2	EAST COAST EROSION CONTROL BLANKETS LLC 443 BRICKER ROAD BERNVILLE, PA 19506

## TYPE B SOIL STABILIZATION MATTING FOR CHANNELS ( VELOCITY 5.0 - 8.5 F.P.S.)

<u>Producer</u>	<u>Supplier / Address</u>
NORTH AMERICAN GREEN P-300 C-350	NORTH AMERICAN GREEN, INC. 14649 HIGHWAY 41 NORTH EVANSVILLE, IN. 47711
ENKAMAT 7210, 7220	EROSION CONTROL SYSTEMS, INC. 1800 McFARLAND BLVD. NORTH TUSCALOOSA, AL. 35406
MIRAMAT HEAVYWEIGHT (TM8) ( 24 oz. / sq. yd. )	MIRAFI, INC. 3500 PARKWAY LANE SUITE 500 NORCROSS, GA. 30092
LANDLOK TRM 435, 450, 1060	SYNTHETIC INDUSTRIES CONSTRUCTION PRODUCTS DIV. 4019 INDUSTRY DRIVE CHATTANOOGA, TENN. 37416
PEC – MAT	GREENSTREAK P.O. BOX 7139 ST. LOUIS, MO. 63177
BON TERRA AMERICAN SFB	BON TERRA AMERICA INC. P.O. BOX 9485 MOSCOW, IDAHO 83843
TENSAR TM 3000	THE TENSAR CORPORATION 1210 CITIZENS PARKWAY MORROW, GA. 30260
PERMAMAT 200F(*) XCEL PP5-10 XCEL PP5-12 XCEL PP5-8 CONTECH TRM C-45, C-60	WESTERN EXCELSIOR CORPORATIN 901 GRAND AVENUE P.O. BOX 659 MANCOS, CO 81328
MULTIMAT 100	CONTECH CONSTRUCTION PROD., INC. 8950 ROUTE 108 SUITE 220 COLUMBIA, MD 21045
RECYCLEX-TRM	TENAX CORPORATION 4800 EAST MONUMENT STREET BALTIMORE, MD 21205 AMERICAN EXCELSIOR COMPANY P.O. BOX 5067 ALINGTON, TX. 76011
	EAST COAST EROSION CONTROL BLANKETS LLC 443 BRICKER ROAD BERNVILLE, PA 19506

**Under no circumstances shall Quick Break Down netting be used on any SHA project. Certification of the netting may be required. (\*) THIS SYSTEM WILL CONSIST OF PERMAMAT 200F BEING PLACED ON THE AREA SURFACE. IT IS THEN FILLED IN WITH SOIL AND COVERD WITH AN APPROVED MAT FROM THE TYPE A MATTING LIST.**

*List of Qualified Concrete Stains for Noise Barriers*

<u>PRODUCT I.D.</u>	<u>COLOR</u>	<u>MANUFACTURER</u>	<u>APPROVAL DATE</u>	
			<u>(PROV.)</u>	<u>(PERM.)</u>
AQUASTAIN T-96	#20045	TAMMS INDUSTRIES	03/24/98	08/14/00
FX-430	#20045	FOX INDUSTRIES	04/28/98	05/24/99
H&C SILICONE ACRYLIC	#20475	SHERWIN WILLIAMS	08/13/98	09/02/99
H&C SILICONE ACRYLIC	#20140	SHERWIN WILLIAMS	08/31/98	09/02/99
H&C SILICONE ACRYLIC	#20045	SHERWIN WILLIAMS	09/09/98	09/02/99
DURA-CRETE 68-161	#20475	DURON PAINTS	02/02/99	05/23/00
DURA-CRETE 68-162	#20045	DURON PAINTS	04/14/99	05/23/00
DURA-CRETE 68-173	#20140	DURON PAINTS	04/14/99	05/23/00
CERTI-VEX GUARD CACS	#20045	VEXCON CHEMICALS	05/30/00	
CANYON TONE STAIN "W"	#20045	UNITED COATINGS	08/15/00	01/24/01
CANYON TONE STAIN "W"	#20140	UNITED COATINGS	08/15/00	01/24/01
CANYON TONE STAIN "W"	#20475	UNITED COATINGS	08/15/00	01/24/01
AQUASTAIN T-96	#20140	TAMMS INDUSTRIES	11/23/01	
AQUASTAIN T-96	#20475	TAMMS INDUSTRIES	11/23/01	

## *List of Qualified Preformed Heat Applied Thermoplastic Marking Material*

When preformed pavement marking materials are used for delineation of the final surface course, only those identified on the list below may be used on the pavement surfaces noted.

<u>Product I.D.</u>	<u>Approved Producer</u>	<u>Approved Color</u>	<u>Approved Pavement Surfaces</u>	<u>Approved Date</u>
PAVEMARK HOTAPE STR-96-194-PA STR-96-195-PA STR-96-196-PA STR-98-056-PA **	ZUMAR INDUSTRIES	WHITE WHITE WHITE YELLOW	HMA,PCC	02/11/99
PREMARK STR-96-124-PA	FLINT TRADING	WHITE	HMA,PCC	02/11/99
PREMARK FLEX 2020 PMM 00-80-PA PMM-00-81-PA PMM 00-82-PA PMM 00-83-PA STR-96-126-PA	FLINT TRADING	WHITE WHITE WHITE WHITE YELLOW	HMA,PCC	02/11/99 03/21/02 03/21/02 03/21/02 03/21/02 02/11/99
THERMALINE LD981035/STR-98-190-PA** LD981036/STR-98-191-PA** STR 98-PA 190 STR 98-PA 191 PMM-00-133-PA**	ENNIS PAINT	WHITE WHITE WHITE WHITE YELLOW	HMA,PCC HMA,PCC HMA,PCC HMA,PCC HMA,PCC	06/20/01 06/20/01 12/03/01 12/03/01 03/13/03
FLAME TAPE PMM-PA-049 **	ENNIS PAINT	WHITE	HMA,PCC	09/20/04

**\*\* This is a tentative approval**

Maryland currently recognizes all hma mixtures as a single category but, reserves the right to withdraw a material ( PREFORMED HEAT APPLIED THERMOPLASTIC MARKING MATERIAL ) from this list when unsatisfactory performance is exhibited.

**HMA - Hot mix asphalt**

**PCC - Portland cement concrete**



**Qualified Products for Waterborne Traffic Marking Materials  
For 2002 (Fast Dry, 60 second no-track)**

<b>Manufacturer</b>	<b>Color</b>	<b>NTPEP Code</b>	<b>Manuf. Code</b>
Ennis	White	PMM2000PA-62	EP415W04
Ennis	White	PMM2000PA-111	LRM00WB20
Ennis	White	PMM2000PA-112	LRM00WB21
Rhom & Haas	White	PMM2000PA-146	DCS2760-1
Rhom & Haas	White	PMM2000PA-158A	DCS2760-14
Sherwin Williams	White	PMM2000PA-178	BP17320

<b>Manufacturer</b>	<b>Color</b>	<b>NTPEP Code</b>	<b>Manuf. Code</b>
Ennis	Yellow	PMM2000PA-65	EP415Y02
Ennis	Yellow	PMM2000PA-67	EP415Y04
Ennis	Yellow	PMM2000PA-68	EP415Y05
Ennis	Yellow	PMM2000PA-69	EP415Y06

**\* Product formula codes are approved, but must be sampled and tested prior to shipment to a SHA project with contract number.**

*Qualified Concrete Stains for Architectural Finishes*

<b><u>PRODUCT I.D.</u></b>	<b><u>MANUFACTURER</u></b>	<b><u>APPROVAL DATE</u></b>	
		<b><u>(PROV.)</u></b>	<b><u>(PERM.)</u></b>
H&C's SHIELD PLUS ULTRA	SHERWIN WILLIAMS	03/03/04	
CANYON TONE STAIN "W"	UNITED COATINGS	08/15/00	12/10/01
FX-430	FOX INDUSTRIES	05/01/02	09/21/04
AQUASTAIN T-96	TAMMS	08/20/03	
DURA-CRETE 68-189 11	DURON	10/21/03	

## *Qualified Hot And Cold Applied Joint Sealants*

### **Hot Applied Joint Sealants**

<b>MANUFACTURER</b>	<b>PRODUCT I.D.</b>	<b>DATE APPROVED</b>
CRAFECO, INC. 1880 EAST RACE STREET ALLENTOWN, PA 18103	ROADSAVER 221 POLYFLEX 518 PAVEMENT JOINT ADHESIVE	JANUARY 2003 MAY 2003 OCTOBER 2004
McASPHALT INDUSTRIES LTD 8800 SHEPPERD AVENUE E. SCARBOROUGH, ONTARIO CANADA, M1B 5R4	BERAM 195	JANUARY 2003
W.R. MEADOWS INC. P.O. Box 338 HAMPSHIRE, IL 60140-0338	SEALTIGHT 3405	JULY 2003

### **Cold Applied Joint Sealants**

<b>MANUFACTURER</b>	<b>PRODUCT I.D.</b>	<b>DATE APPROVED</b>
UNIQUE PAVING MATERIALS 3993 E. 93 <sup>rd</sup> STREET CLEVELAND, OH 44105	KOLDFLO	JANUARY 2003

**2003 Maryland Compost Suppliers  
Landscape Operations Division**

**Biosolids Compost (Type A)**

**Aberdeen WWTP/Composting Fac.**

Kenneth Benner, Superintendent  
Aberdeen WWTP  
361 Michael Lane  
Aberdeen, MD 21001  
Ph: 410-272-2651 Fax: 410-273-1253

**Baltimore City Composting Facility**

Preston E. Cloke or David Hill, Project Managers  
Professional Services Group  
5800 Quarantine Road  
Baltimore, MD 21226

**Elkton WWTP/Composting Facility**

Severn Trent Environmental Services  
Contact: Stan Wright 410-392-0711 fax: 410-392-0758  
Superintendent: Mark Turnpull  
200 W. Pulaski Highway  
Elkton, MD 21921  
410-398-6760 (plant) Fax: 410-398-1299

**Havre de Grace WWTP/Composting**

Donna Costango  
City of Havre de Grace DPW  
711 Pennington Avenue  
Havre de Grace, MD 21078  
Plant: 1 Jerry Foster Way  
Havre de Grace, MD 21078  
Ph: 410-939-1220 (plant) fax: 410-939-8275

**Perryville WWTP/Composting Fac.**

Contact: MES, Ahmad Razik  
Ph: 410-974-7276 Fax: 410-974-7267  
Alvin Hathaway, Chief WWTP Operator  
Town of Perryville  
515 Broad Street, P.O. Box 773  
Perryville, MD 21903  
Ph: 410-642-6142 (plant) fax: 410-642-6391

**Queen Anne's/Kent Island WWTP/Composting**

Charles Nelson, Chief WWTP Operator  
Queen Anne's County Sanitary District  
310 Bateau Drive, P.O. Box 10  
Stevensville, MD 21666  
Ph: 410-643-3535 (dispatch) Fax: 410-643-7364

## **Source-Separated Compost (Type B)**

### **Forest Recycling Project, Inc.**

Attn: Jeff Bassler  
5050 Sheppard Lane  
Ellicott City, MD 21042  
Ph: 410-531-2193 Fax: 410-531-6167

### **Southern Maryland Manure Service**

Attn: Yates Clagett  
17011 River Airport Road  
Brandywine, MD 20613  
Ph: 301-579-2486 Fax: 301-574-5456

### **New Earth Services, Inc.**

Attn: C. Patrick Condon  
306 Mill Street  
Cambridge, MD 21613  
Ph: 410-2216057 Fax: 410-221-6053

### **Earthwise/Hideaway Farm, LLC**

Attn: Buddy Cox  
2209 Cox Road  
Gambrills, MD 21054  
Ph: 410-793-0127 Fax: 410-721-8067

### **Mill Dale Farms, Inc.**

Attn: William Hibberd, Jr.  
801 Green Valley Road  
New Windsor, MD 21776  
Ph: 410-635-6141 Fax: 410-635-3282

### **Pogo Tree Experts/Acme Biomass**

Attn: Pogo Sherwood  
17328 Georgia Avenue  
Olney, MD 20832  
Ph: 301-774-2968 Fax: 301-774-3691

### **Obligation Farm**

Attn: Christopher Wilson  
4024 Solomon's Island Road  
Harwood, MD 20776  
Phone: 410-798-1650

### **Maryland Environmental Services**

Attn: Marketing Department  
Contact: Robert Natarian  
2011 Commerce Park Drive  
Annapolis, MD 21401  
Ph: 301-261-8596 Alt Phone: 301-627-6487

### **Dickerson Compost Facility**

Attn: Nanci Koerting  
21210 Martinsburg Road  
Dickerson, MD 20842  
Ph: 301-428-8185 Fax: 301-428-8311

## *Qualified Detectable Warning Surfaces*

<b>Product Name</b>	<b>Color</b>	<b>Producer</b>	<b>Approval Date</b>
ARMOR-TILE	FEDERAL YELLOW	ENGINEERED PLASTICS INC.	08/11/05

## **QUALIFIED PAVEMENT MARKING MATERIAL PROCEDURE**

It is Maryland State Highway Administration's (SHA) policy to test and evaluate new Pavement Marking Material assuring that they meet or exceed Maryland Specifications. In order to ensure fairness and consistency the following procedures will be applied to all manufactures' candidate materials for pavement markings.

### **Permanent Material**

1. A manufacturer shall place the candidate material on the North National Transportation Product Evaluation Program (NTPEP) Test Deck.
2. The NTPEP test results, both field (1) and Laboratory (2) are compared to Maryland's pre-approval requirements.
3. When a pavement marking material's NTPEP results indicate it meets Maryland's specifications it will be tentatively approved for limited placement with further evaluation on Maryland highways. (If this material has been previously approved for use in Maryland no additional evaluations on Maryland highways will be required.)
4. The Maryland evaluation will last through one winter or, through the snowplowing season.
5. Upon satisfactory completion of Color, Retro-reflectivity, Durability, and Lab evaluations, the material will be placed on The Maryland SHA Pre-qualified List for a period of four (4) years.
6. All original material samples will be taken at the manufacturers' facilities, and tested in the Lab.
7. If components or proportioning of the material changes, the material must be re-identified and the above procedure repeated.
8. Maryland reserves the right to withdraw ANY approval or pre-qualification if the material demonstrates poor performance. Maryland also reserves the right to extend the Field evaluations if the results are borderline.

## **QUALIFIED PAVEMENT MARKING MATERIAL PROCEDURE**

It is Maryland State Highway Administration's (SHA) policy to test and evaluate new Pavement Marking Material assuring that they meet or exceed Maryland Specifications. In order to ensure fairness and consistency the following procedures will be applied to all manufactures' candidate materials for pavement markings.

### ***In-laid Permanent Material***

**In-laid Tape: Definition – When a tape material is placed on a hot surface and is pressed into the HMA pavement while still hot by the final pass of the paving roller.**

**The In-laid process will be evaluated and the material must satisfactorily meet the above criterion.**

9. A manufacturer shall place the candidate material on the North National Transportation Product Evaluation Program (NTPEP) Test Deck.
10. The NTPEP test results, both field (1) and Laboratory (2) are compared to Maryland's pre-approval requirements.
11. When a pavement marking material's NTPEP results indicate it meets Maryland's specifications it will be tentatively approved for limited placement with further evaluation on Maryland highways. (If this material has been previously approved for use in Maryland no additional evaluations on Maryland highways will be required.)
12. The Maryland evaluation will last through one winter or, through the snowplowing season.
13. Upon satisfactory completion of Color, Retro-reflectivity, Durability, and Lab evaluations, the material will be placed on The Maryland SHA Pre-qualified List for a period of four (4) years.
14. All original material samples will be taken at the manufacturers' facilities, and tested in the Lab.
15. If components or proportioning of the material changes, the material must be re-identified and the above procedure repeated.
16. Maryland reserves the right to withdraw ANY approval or pre-qualification if the material demonstrates poor performance. Maryland also reserves the right to extend the Field evaluations if the results are borderline.



## **QUALIFIED PAVEMENT MARKING MATERIAL PROCEDURE**

It is Maryland State Highway Administration's (SHA) policy to test and evaluate new Pavement Marking Material assuring that they meet or exceed Maryland Specifications. In order to ensure fairness and consistency the following procedures will be applied to all manufactures' candidate materials for pavement markings.

### **Removable Material**

1. A manufacturer shall place the candidate material on the North National Transportation Product Evaluation Program (NTPEP) Test Deck.
2. The NTPEP test results, both field (1) and Laboratory (2) are compared to Maryland's pre-approval requirements.
3. When a pavement marking material's NTPEP results indicate it meets Maryland's specifications it will be tentatively approved for limited placement with further evaluation on Maryland highways. (If this material has been previously approved for use in Maryland no additional evaluations on Maryland highways will be required.)
4. The Maryland evaluation will last for 6 months.
5. Upon satisfactory completion of Color, Retro-reflectivity, Durability, and Lab evaluations, the material will be placed on The Maryland SHA Pre-qualified List for a period of four (4) years.
6. All original material samples will be taken at the manufacturers' facilities, and tested in the Lab.
7. If components or proportioning of the material changes, the material must be re-identified and the above procedure repeated.
8. Maryland reserves the right to withdraw ANY approval or pre-qualification if the material demonstrates poor performance. Maryland also reserves the right to extend the Field evaluations if the results are borderline.

## Maryland Pre-approval Requirements 2000/2001:

### Permanent Material:

(1) **Field Requirements** – Field Evaluation Data is reviewed for compliance with Maryland Specifications @ two years.

Retro-reflectivity – When measured outside of the wheel path on transverse lines using a 30 – meter retro-reflectometer the minimum shall be:

- 200 mcd/lux/sq./m. for white
- 150 mcd/lux/sq./m. for yellow

Durability – (film loss) >6 (on a scale of 0-10 with 10 being the best)

Color – Satisfactory comparison to yellow chart or white chip.

(2) **Lab Criteria** – see Special Provisions Inserts and Designated Test

### Removable Material:

(1) **Field Requirements** – Field Evaluation Data is reviewed for compliance with Maryland Specifications @ one year.

Retro-reflectivity – When measured outside of the wheel path on transverse lines using a 30 – meter retro-reflectometer the minimum shall average:

- 200 mcd/lux/sq./m. for white
- 150 mcd/lux/sq./m. for yellow

Durability (film loss)>4 (on a scale of 0-10 with 10 being the best).

Color - Satisfactory comparison to yellow chart or white chip.

Removability - > 6 (scale 0-10)

Discernability - < 3 (scale 0-10)

Adherence - > 6 (scale 0-10)

(2) **Lab Criteria** – see Special Provisions Inserts and Designated Test

**Removable or temporary materials ONLY may be evaluated based on the results of any NTPEP test deck OR Maryland State Highway's field test sites approval by a Senior Manager is required.**

## Non – Durable Material

### Traffic Paint

1. A manufacturer shall place the candidate material on the North National Transportation Product Evaluation Program (NTPEP) Test Deck.
2. The NTPEP test results, both Field (1) and Laboratory (2) are compared to Maryland's Pre-approval requirements.
3. When the traffic paint's NTPEP results indicate it meets Maryland's specifications it will be approved for bidding purposes. Further evaluations of the no track dry time will be conducted on Maryland highways. (If this material has been previously approved for use in Maryland no additional evaluations on Maryland highways will be required.)
4. Upon satisfactory results of Color, Retro-reflectivity, Durability and Laboratory evaluations, the material will be placed on The Maryland SHA Pre-Qualified List for a period of two (2) years.
5. All original material samples will be taken at the manufacturers' facilities, and tested in the Laboratory.
6. Maryland reserves the right to withdraw ANY approval or Pre-Qualification if the material demonstrates poor performance. Maryland also reserves the right to extend the field evaluations if the results are borderline.

**(1) Field Requirements:** Field Evaluation Data is reviewed for compliance with Maryland Specifications @ one year.

Retroreflectivity – When measured outside of the wheel path on the transverse lines using a 30 – meter retro-reflectometer the minimum shall average:

\*200 mcd/lux.sq./m. for white

\*150 mcd/lux/sq./m. for yellow

Durability – (film loss) > 6 (on a scale of 0-10 with 10 being the best)

Color – Satisfactory comparison to yellow chart or white chip.

\* **Note:** These minimum numbers will change every two years depending on the % of higher or lower results from all the candidate materials.

**(2) Lab Criteria** – see Special Provisions Inserts and Designated Test.

## **CONTINUAL APPROVAL**

Permanent Durable material, regardless of previous approval, shall be placed on the NTPEP North deck every four (4) years. Future approvals will be based on those results.

Removable materials, regardless of previous approval, shall be placed on any of the NTPEP Decks every four (4) years. Future approvals will be based on those results.

Permanent Non-Durable material (Traffic Paint) shall be placed on the NTPEP North deck every two (2) years. Future approvals will be based on those results.

*Office of Traffic & Safety's*  
**Approved Product List**  
**For Temporary Traffic Control Devices**  
**& Miscellaneous Items**

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Appendix A

-List of Prequalified Removable Preformed Pavement Marking Material for Maintenance of Traffic

-Approved Products for Waterborne Traffic Marking Materials for 2000

(Fast Dry, 60 sec. no-track)

Appendix B

Company Listing, Addresses and Phone Numbers

## INTRODUCTION

This Approved Product List (APL) contains those Maintenance of Traffic products that have been approved for use and are required by State Highway Administration's standards, specifications, and policies when working on or along Maryland roadways. Many of the products on this list have also passed NCHRP Report 350 crashworthy requirements. If a product has passed NCHRP Report 350 requirements, this does not necessarily mean that this product can be used on Maryland's roadways. If a contractor or other agency would like to use a particular product on Maryland's roadways, then he/she should contact the manufacturer and ask the manufacturer to submit product literature to the New Products Committee of the Office of Traffic & Safety for review and evaluation. Please send request for product approvals to the Office of Traffic and Safety, New Product Committee, 7491 Connelley Drive, Hanover, MD 21076-1702.

This list has been prepared to facilitate the search of those products that are permitted on Maryland's roadways. Products that are being used on Maryland's roadways and are not included on this list are subject to removal at the cost to the contractor or other agency, which was responsible for the installation of the product on SHA's right-of-way. Also, please note that products may continue to be added, or removed from this list if deemed to perform unsatisfactorily.

The approved products or items are listed under titles and section numbers, which are similar to those found in the "Maryland Department of Transportation Standard Specifications for Construction and Materials" book. The APL includes a reference number behind each manufacturer's name, which refers to that manufacturer's contact information in Appendix B.

**These products shall also meet the Manual on Uniform Traffic Control Devices (MUTCD) requirements as well as comply with Maryland's standards and specifications, which may exceed the minimum MUTCD requirements. For example, verify design of temporary traffic control devices (width of stripes, material, etc.) comply with the above standards and specifications.**

Any questions regarding the Approved Product List may be referred to [www.marylandroads.com/mpel/](http://www.marylandroads.com/mpel/)

## **104.03 Temporary Raised Pavement Markers**

### **Ray-O-Lite Company (R2)**

Ray-O-Lite Marker Model AA (All Acrylic) 9700 Series

### **Stimsonite (S4)-----(Avery Dennison Corp.)**

Stimsonite Model 88 (to be discontinued) Replaced with Avery Dennison 80F (3/25/05)

### **PAC-Tec, Inc. (P4)**

Snow Lite 300 (note: temporary approval)

### **Safe Hit (S1)**

Guidepost

### **Filtrona Extrusion (B3) (Formerly Davison Products)**

Davidson Plastics Temporary Overlay Markers (TOMS)

Note: "TOMS" are a cost-effective alternative for a short duration and low AADT. (<3 weeks duration) (<7,000 AADT)

Davidson RPM model 35.

## **104.04 Temporary Concrete Traffic Barrier**

Jersey Type Barrier with Pin and Loop connection

Note: Any connection shown in the AASHTO Roadside Design Guide Manual is currently approved for use as a connection for the Jersey Type Barrier.

### **Rockingham Precast (R5)**

T-Lok Barrier

### **Easi-set Industries (E1)**

Jersey Type Barrier (j-j hook)

Note: As of the date July 1, 2001 all permanent barrier shall be F shape barrier. For temporary barrier you should use F shape barrier, jersey type barrier is accepted until January 1, 2006. Temporary Jersey barrier is being phased out.

Note: Lateral deflection of barrier when impacted by 2000 kg vehicle at 100 kph and 25 degree impact angle is approximately X feet.

Temporary concrete barrier with J-J hook: 4'

Moveable barrier:4'

## **104.05 Traffic Barrier W Beam**

**End Treatments: Refer to 104.09 and 104.10**

## **104.06 Tubular Markers**

### **Astro Optics Corp (A3)**

Astro Re-bouncer Flexible Post (RFP)

### **Bent Manufacturing Co. (B2)**

Up-Rite Glue-Down Posts



## **Carsonite International (C1)**

The Super Duck (SDR -328)

## **Filtrona Extrusion - Tacoma (B3)**

FG 300 Delineator Post

FG 300 Curb System

## **Impact Recovery (I1)**

201-S

## **Safe Hit (S1)**

Channelizer (Tubular Type)

## **TraFFix Devices, Inc. (T2)**

Flexible Tube Delineator

## **104.07 Arrow Panels**

Diesel / Solar powered as approved by the Engineer (These products are currently under review or being re-evaluated.)

## **Solar Technology, Inc.( S5)**

Silent Sentinel (Truck and Trailer Mounted)

## **Trafcon Industries, Inc. (T5)**

TC1-25S Solar Arrow Board (Trailer mounted)

TC1-15S Solar Arrow Board (Trailer Mounted)

## **104.08 Temporary Traffic Signs**

### **Post Mounted Sign Sheeting and Backing Material**

-3M Fluorescent Orange Diamond Grade Sign Sheeting (T1)

on aluminum sign backing, or Alpolic and DiBond sign backing material (M3) & (A4).

*Note: Type III retroreflective (orange) sign sheeting to be discontinued effective  
December 31, 2003.*

### **Portable Mounted Sign Sheeting and Backing Material**

-Reflexite's Marathon Sign Material, Fluorescent Orange Roll-up (R3)

*Note: Aluminum signing discontinued effective October 1, 2003.*

*Reflexite's Superbright roll-up sign material to be discontinued effective  
December 31, 2002.*

-3M Fluorescent Orange Diamond Grade Roll-Up Sign (T1)

-3M Fluorescent Orange Diamond Grade Sign Sheeting (T1)

on plastic, Alpolic or DiBond sign backing material (M3)

## **Portable Sign Stands**

The following sign stands are approved for use with Alpolic, DiBond, or roll-up material:

### **Bone Safety Signs (B4)**

Model SZ 412 (same as old model CZ 130)

Model SZ 412/S

### **Dicke Tool Company (D1)**

Model DF3003W (same as old model DF3000RE)

Model DF3003S (same as old model DF3003)

DF-3003S

TF-12-C

TF-12-W

TF-18-RUB

TF-60-RUB

### **Eastern Metal/USA-Signs (E2)**

Model C-102 (or C-132)

Model C-200

Model C-902

Model C-942

Model Interstate Stand X-500 (501 hardware)

Model Interstate Stand X-550 (551 hardware)

Model Interstate Stand X-600 (601 hardware)

The Following sign stands are approved for use with Alpolic, DiBond, or roll-up Material:

Model Interstate Stand X-552 (sign mounting height 15" above grade)

Model Interstate Stand X-602 (sign mounting height 5' above grade)

Model E-350 (sign mounting height 15" above grade)

Note: Special clamps listed below may be used for guardrail and barrier in accordance with manufacturer's specifications when allowed by Engineer.

Guard Rail Clamp GRC-5-LS

Median Barrier Clamp (MBC) Base

### **Korman Signs, Inc. (K1)**

Model SS 548 (Approved for use with Alpolic, DiBond, or roll-up material)

Model SS 548 A

Model SS 548 UC

Model SS 548 UCA

Model SS 548 CA

Model SS 560 (Approved for use with Alpolic, DiBond, or roll-up material)

Model SS 560 A

### **Marketing Displays International (MDI) (M1)**

#### Windmaster

Model 4815

Model 4818 (Approved for use with Alpolic, DiBond, or roll-up material)

Model 4850

Model 4860 (Approved for use with Alpolic, DiBond, or roll-up material)

Model 5018 (Approved for use with Alpolic, DiBond, or roll-up material)

#### Steelmaster

Model 50SM

40CAMKD

### **Services & Materials (S2)**

Model QFV-W

Model QFV-60

Model QFV-48

Model QFVR (W/ADAPTOR FOR ROLLUPS) QFV MD (30" Leg)

### **Signs and Safety Equipment**

UF-2000

### **TraFFix Devices, Inc. (T2)**

Model 22000

Model 24018

\* Please note that portable sign stands may have passed NCHRP350 crash tests with addition of certain breakaway features. Please make sure you order the sign stands with exactly the same features as tested. Also, these sign stands should be installed as tested.

## **104.09 Temporary Traffic Barrier End Treatments**

(Double "w" beam traffic barrier or temporary concrete barrier end treatments)

### Type E Traffic Barrier End Treatment

#### **Energy Absorption Systems, Inc. (E3)**

QuadGuard CZ

QuadGuard (Temporary and permanent applications)

#### **Trinity Industries, Inc. (T4)**

TRACC (Approved Alternate)

### Type J Traffic Barrier End Treatment

#### **Energy Absorption Systems, Inc. (E3)**

REACT 350

QuadGuard LMC (Temporary and permanent applications)

QuadGuard Elite (Temporary and permanent applications)

### Moveable Concrete Barrier End Treatments

#### **Barrier Systems, Inc. (B1)**

Absorb 350 Crash Cushion \*(May be used with temporary or permanent barrier)

## **104.10 Temporary Crash Cushion Sand Filled Plastic Barrels**

#### **Energy Absorption Systems, Inc. (E3)**

Energite III System

#### **Roadway Safety Service (R4)----- (Energy Absorption Systems, Inc. [E3])**

FITCH---modified Fitch Universal Module Crash Cushion

## **TraFFix Devices Inc. (T2)**

TraFFix Sand Barrel System

## **104.11 Temporary Pavement Markings**

Please refer to Maryland State Highway Administration's Office of Materials and Technology:

For "List of Qualified Removable Preformed Pavement Marking Material for Maintenance of Traffic", and "Approved Products for Waterborne Traffic Marking Materials for 2000", (See Appendix A).

Note: 3M's Black Masking (Patterned) Tape, Premark's Preformed Heat Applied Thermoplastic Material, ATM280 Hide-A-Line (Advanced Traff. Markings), BTR Blackout Tape (Briteline) have been approved for covering markings.

Trelleborg (Black Masking RB-140), 9/23/05  
SWARCO (Director 2 Blackout Tape),

## **104.12 Drums**

### **Eastern Molding International (E4)**

High Tech - Model HTLD-6DG

### **Plastic Safety System, Inc. (P3)**

Lifeguard

Lifeguard II

### **Radiator Specialty Company (R1 )**

Safe-T-Drum

### **Services & Materials, Inc. (S2)**

Channelizers 1500

Trail Blazer Model 1600

### **TraFFix Devices, Inc. (T2)**

TraFFix Channelizer Drum

### **Work Area Protection, Corp (W2)**

B-400 Plastic Channelizer Drum

### **Plasticade Products (P1)**

Rhino Barrel

### **Bent Manufacturing Co. (B2)**

Superdome

## **104.13 Barricades**

### Types I and II

### **Services & Materials, Inc. (S2)**

Type I PRB-124 Plastic Barricade (only)

**TraFFix Devices, Inc. (T2)**

TraFFix Plastic Folding Barricades

Type III

**Filtrona Extrusion- Tacoma (B3)**

T3B Plastic Barricades

**TraFFix Devices, Inc. (T2)**

TraFFix Breakaway Type III Barricade (plastic TraFFix rails, and utilizing Unistrut's Telespar tubing)

**Plasticade Products (P1)**

All Plastic Type III Collapsible Barricade

**Korman Signs, Inc. (K1)**

WBT3BRH (7' Type III Barricades)

WBT3SW (7' Type III Barricades)

WBT3SWH (7' Type III Barricades)

“Note: No aluminum signs will be allowed on the Type III barricade, only the approved roll-up, composite and plastic materials will be allowed on the Type III barricades as sign material.”

**104.14 Cones**

**Eastern Metal USA-Sign (E2)**

Model FLO CONE TC-28FC

Model FLO CONE TC-28FCH

**JBC Safety Plastics, Inc. (J1)**

Model RC 70030C

Model RC 70030R

Model RC 70045C

Model RC 90045C

Model RC 90050C

**Radiator Specialty Company (R1)**

28PO

28POR

28POH

28POHR

4328R

4328-10R

4328-12R

**Service & Materials (S2)**

Model #0100355 Cone TC-28DW

Model #2058087 Cone TC-28W

Model #2058635 Cone TC-28WH 10 lb.

## **Work Area Protection, Corp. (W2)**

Model 28 PVCS  
Model 28 PVCH

### **104.15 Flagger**

**MD SHA Approved training:**  
**American Traffic Safety Services Association (A1)**

Flagger certification course

### **MTS (M4)**

Adjustable Flag Post

## **104.17 Temporary Moveable Type Concrete Traffic Barrier**

### **Barrier Systems, Inc. (B1)**

Quick Change Moveable Barrier

Note: The Office of Traffic & Safety's approval is necessary before using the moveable barrier on any SHA project.

## **104.18 Traffic Manager**

MDSHA approved:

Maryland Highway Contractors Association (M2)]  
Temporary Traffic Control Traffic Manager's Training Course

## **104.19 Portable Variable Message Signs**

### **3 M (M5)**

Model No. 3M DMS 4

### **ADDCO Manufacturing Company (A2)**

Model Nos. DH-1000, DH-1100

### **Precision Solar Controls, Inc. (P2)**

Model No. SMC-1000 (amber display)

### **Winko-Matic Signal Company Multisonics Corp. (W1)**

Model No. GEN 6, Nighthawk 345

### **Ver-Mac, Inc. (V1)**

Model No. 1210 (testing interim approval)

## **Solar Technology, Inc (S5)**

Silent Messenger ( size 126" \* 76")

Model No. MB-2248

Model No. MB-3048

Model No. MB-3748

Model No. MB-4048

## **104.20 Temporary Orange Construction Fence**

As approved by the Engineer

### **Special Provision—Barrier Delineator**

**Astro Optics Corp (A3)**

**JD -1**

**JD -2**

### ***Filtrona Extrusion (B3)***

PCBM 12 Y1 (barrier Mount)

PCBM 12 W1 (barrier Mount)

IBM 12 Y1 (I Beam Mount) Note: using Reflexite AR 1000 Amber Sheeting

IBM 12 W1 (I Beam Mount) Note:using Reflexite AR 1000 Silver Sheeting

### **Duraflex Corporation(D2)**

2020 Rail Rider

### **Stimsonite (S4)**

Model 965

## **Special Provision--Truck Mounted Attenuator**

**Energy Absorption Systems, Inc. (E3)**

Safe Stop Truck Mounted Attenuator

Model ALPHA 100K (modified)

**Patrico, Inc. (P5)**

U\_MAD 100K

**TraFFix Devices, Inc. (T2)**

Scorpion Traffic Mounted Attenuator

**Trinity Industries, Inc. (T4)**

MPS-350

## **Special Provision--Water Filled Barrier**

**Energy Absorption Systems, Inc. (E3)**

Triton Barrier

Triton End Terminal (for Triton Barrier Only---non redirective terminal)

**Armocast Products Company (A5)**

Guardian 350 Highway Barrier

**Yodock Wall Co., Inc. (Y1)**

Yodock Longitudinal Barrier-Model 2001

Lateral deflection of barrier when impacted by 2000 kg vehicle at 100 kph and 25 degree impact angle is approximately X feet.

Water-filled barriers

Yodock: 14'

Guardian: 11'

Triton: 19' – 22'

Note: The Office of Traffic & Safety's approval is necessary before using the water filled barrier on any SHA project.



## APPENDIX B

### Company Listing, Addresses and Phone Numbers

- A1. American Traffic Safety Services Association Flaggers**  
15 Riverside Parkway, Suite 100  
Fredericksburg, VA 22406 – 1022  
(877) 642 - 4637
  
- A2. ADDCO Manufacturing Company**  
69 Empire Drive  
St. Paul, Minnesota 55103  
(612) 224 - 8800
  
- A3. Astro Optics Corp**  
156 Williams Street  
Carpentersville, IL 60110  
(847) 428 - 3181
  
- A4. Alcan Composites, Inc.**  
208 W. 5<sup>th</sup> Street  
Benton, KY 42025  
(800) 626-3365  
(270) 527-4200
  
- B1. Barrier Systems, Inc.**  
1100 E. William Street, Suite 206  
Carson City, NV 89701 - 3104  
(702) 885 - 2500
  
- B2. Bent Manufacturing Co.**  
17311 Nichols Street  
Huntington Beach, CA 92647 – 5721  
(714) 842 – 0600
  
- B3. Filtrona Extrusion Washington, Inc. – Tacoma Division**  
3110 70<sup>th</sup> Avenue  
East Tacoma, WA 98424  
(253) 284-8000
  
- B 4 Bone Safety Signs (B4)**  
1761 Mc Coba Drive  
Suite A  
Smyrna, GA 30080  
(800) 873-2399
  
- C1. Carsonite International**  
605 Bob Gifford Blvd.  
Early Branch, SC 29916  
(800) 648 – 7916

- D1. Dicke Tool Company  
1201 Warren Avenue  
Downers Grove, IL 60515  
(636) 273 – 5566**
- D2 Duraflex Corporation  
297 Margaret King Avenue  
Ringwood, NJ 07456  
(973) 962-7652**
- E1. Easi-Set Industries  
5119 Catlett Road, Suite 200  
Midland, VA 22728  
(800) 547 - 4045**
- E2. Eastern Metal/USA-Signs  
1430 Sullivan Street  
Elmira, NY 14901  
(800) 872 – 7446**
- E3. Energy Absorption Systems, Inc.  
One East Wacker Drive  
Chicago, IL 60601 - 2076  
(312) 467 – 6750**
- E4 Eastern Molding International  
PO Box Elizabeth Street  
Batavia, NY 14020**
- I1. Impact Recovery Systems, Inc.  
P.O. Box 12637  
San Antonio, Texas 78212  
(210) 736 – 4477**
- J1. JBC Safety Plastics, Inc  
1616 Dielman Ave.  
St. Louis, MO 63132  
(866) 966-2663**
- K1. Korman Signs, Inc.  
3029 Lincoln Avenue  
Richmond, VA 23228-4295  
(804) 262 - 6050**
- M1. Marketing Displays International (MDI)  
38271 W. Twelve Mile Road  
Farmington Hills, Michigan 48331-3041**
- M2. Maryland Highway Contractors Association  
2408 Peppermill Drive, Suite F  
Glen Burnie, MD 21061  
(410) 760 - 9505**

- M3. Mitsubishi Chemical America, Inc.  
Composite Materials Division  
401 Volvo Parkway  
Chesapeake, VA 23320  
(800) 422 – 7270**
- M4. MTS Safety Products  
PO Box 38847  
Golden, MS 38847  
(800) 647-8168**
- M5 3M Traffic Control Division  
33045 Knolls Parkway  
Ijamsville, MD 21754**
- P1. Plasticade Products  
7700 Austin Avenue  
Skokie, IL 60077  
(800) 772 - 0355**
- P2. Precision Solar Controls, Inc.  
2915 National Court  
Garland, Texas 75041  
(214) 278 – 0553**
- P3. Plastic Safety System, Inc.  
PO BOX 20140  
Cleveland, OH 44120**
- P4. PAC-Tec, Inc.  
1870 James Parkway  
Heath, OH 43056**
- P5. Dimensional Products, Inc.  
P.O. Box 975  
Reisterstown, MD 21136-0975**
- R1. Radiator Specialty Company  
1900 Wilkinson Boulevard  
Charlotte, N. C. 28234-4689  
(704) 377 - 6555**
- R2. Ray-O-Lite Company  
Division of Pac-Tec, Inc.  
1870 James Parkway  
Heath, Ohio 43056  
(800) 848 - 7025**
- R3. Reflexite North America  
315 South St.  
New Britain, CT 06051  
(860) 223 - 9297**
- R4. Roadway Safety Service----(See Energy Absorption Systems Inc. [E3])**

- R5. Rockingham Precast  
Highway 42 South  
Harrison, VA 22801  
(540) 433-8282**
- S1. Safe Hit  
23785 Cabot Blvd. # 322  
Hayward, CA 94545  
(312) 467 – 6750**
- S2. Services & Materials  
125 Cassens Court  
Fenton, MO 63026  
(800) 428 - 8185**
- S3. Signs and Safety Equipment, Inc.  
95 Hibbard Rd.  
Big Flats, NY 14814  
(607) 562 - 8463**
- S4. Stimsonite -----(Avery Dennison Corp.)  
6565 West Howard Street  
Niles, IL 60714  
(800) 327 – 5917**
- S5. Solar Technology, Inc  
7620 Cetronia Road  
Allentown, PA 18106  
(610)-391-8600**
- S6. Swarco Industries  
P.O. Box 89  
Columbia, Tennessee 38402-5900  
(615) 388-5900**
- T1. 3M Company  
3M Center, Building 225-5S-08  
P. O. Box 33225  
St. Paul, MN 55133 - 3225  
(800) 553 - 1380**
- T2. Traffix Devices, Inc.  
220 Calle Pintoresco  
San Clemente, California 92672  
(949) 361 - 5663**
- T3. Traffic Safety Devices Inc.  
P.O. Box 26716  
Elkins Park, Pennsylvania 19027**
- T4. Trinity Industries, Inc.  
Highway Safety Products Division  
2525 Stemmons Freeway  
Dallas, TX 75207**

- T5. Trafcon Industries, Inc.  
81 Texaco Road  
Mechanicsburg, PA 17050  
717-691-8007**
  
- T6. Trelleborg Industries  
22 Chandler Road  
Edison, New Jersey 08820  
(732) 494-0723**
  
- V1. Ver-Mac, Inc.  
2120 Lavoisier  
Ste-Foy, Quebec G1N 4B1 Canada**
  
- W1. Winko-Matic Signal Company Multisonics Corp.  
6301 Best Friend Road  
Norcross, Georgia 30071  
(404) 662 – 5400**
  
- W2. Work Area Protection, Corp.  
P.O. Box 4087  
St. Charles, IL 60174  
(630) 377 – 9100**
  
- Y1. Yodock Wall Co., Inc.  
623 N.E. 5<sup>th</sup> Terrace  
Ft. Lauderdale, FL 33304  
(888) 496-3625**