

APPENDIX B

Detailed Reactivity Analysis Data

Table B-1 contains the maximum ozone formation potential for each category in 50-g/l ranges. The data in Table B-1 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004.

Table B-1: Maximum Ozone Formation Potential (tons/day) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 – 150	151 – 200	201 – 250	251 – 300	301 – 350	351 – 400	401 – 450	451 – 500	501 – 550	551 – 600	601 – 650	651 – 700	>700 g/l	Totals
Bituminous Roof	0.06	0.01	0.02		0.58	0.41	0.00			0.04						1.1
Bituminous Roof Primer	0.00			0.02	0.00		0.38	0.03	0.04	0.04						0.5
Bond Breakers		0.00		0.00		0.64		0.11						0.00	0.01	0.8
Clear Brushing Lacquer													0.00	1.06		1.1
Concrete Curing Compounds	0.00	0.02	0.01	0.04	0.31	0.33	0.68		0.07		0.01	0.00	0.01	0.08		1.6
Driveway Sealer	0.04							0.00	0.04	0.00						0.1
Dry Fog	0.02	0.06	0.01	0.00	0.00	0.12	0.09	1.41								1.7
Faux Finishing	0.00	0.08	0.02	0.01	0.09	0.01	0.44	0.03	0.02		0.01	0.04		0.01	0.21	1.0
Fire Resistive	0.00	0.00					0.04	0.00								0.0
Fire Retardant - Clear										0.01	0.00		0.00			0.0
Fire Retardant - Opaque	0.00	0.00	0.00				0.90									0.9
Flat	0.93	29.89	5.62	0.16	0.01		0.10		0.01	0.00						36.7
Floor	0.00	5.04	0.10	0.09	0.88	0.00	0.00	0.12		0.01						6.3
Form Release Compounds	0.00	0.01	0.00	0.00	1.19				0.01				0.09		0.00	1.3
Graphic Arts				0.00	0.00	0.00	0.00	0.01	0.01							0.0
High Temperature						0.01	0.05	0.02	0.02	0.03	0.01	0.00	0.00			0.1
Industrial Maintenance	0.08	0.14	0.31	1.99	4.39	1.63	2.82	1.48	1.91	0.03	0.01	0.10	0.00		0.01	14.9
Lacquers	0.05	0.00	0.14	0.02	0.09	0.87	0.01	0.05		0.03	4.41	0.55	0.01	3.00	0.00	9.2
Low Solids	0.02	0.09	0.00													0.1
Magnesite Cement									0.72							0.7
Mastic Texture	0.00	0.68	0.03	0.01	0.23			0.04								1.0
Metallic Pigmented	0.19	0.07	0.04	0.00	0.07	0.02	0.11	0.40	3.84	1.25	0.01	0.01		0.01	0.02	6.1
Multi-Color		0.00			0.00					0.00		0.00				0.0

Table B-1: Maximum Ozone Formation Potential (tons/day) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 – 150	151 – 200	201 – 250	251 – 300	301 – 350	351 – 400	401 – 450	451 – 500	501 – 550	551 – 600	601 – 650	651 – 700	>700 g/l	Totals
Nonflat - High Gloss	0.03	0.17	0.87	2.03	0.41	0.04	0.05	0.17	0.01	0.04			0.00			3.8
Nonflat - Low Gloss	0.13	3.73	14.46	0.08	0.07	0.01	0.00	0.01	0.01		0.08		0.00			18.6
Nonflat - Medium Gloss	0.25	3.32	21.43	0.94	2.84	0.43	0.00	0.36	0.06	0.01						29.6
Other	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00		0.01		0.1
Pre-Treatment Wash Primer			0.00												0.02	0.0
Primer, Sealer, and Undercoater	0.25	2.47	2.98	11.41	0.09	0.08	0.84	0.01	0.05	0.01	0.01	0.00	0.00	0.03	0.16	18.4
Quick Dry Enamel	0.00			0.00	0.18		0.00	3.80	0.62	0.01						4.6
Quick Dry Primer, Sealer, and Undercoater	0.00		0.00	0.06	0.00		0.37		1.25	0.01	0.00					1.7
Roof	0.45	0.22	0.07	0.01	0.28	0.11	0.01	0.00	0.00	0.00						1.1
Rust Preventative	0.00	0.01	0.05	0.02	0.00	0.06	2.51	10.99	1.09	0.75	0.02					15.5
Sanding Sealers	0.00	0.01		0.00	0.01	0.02	0.00		0.06	0.00	0.19	0.23	0.00		0.00	0.5
Shellacs - Clear												0.10	0.28	0.17		0.6
Shellacs - Opaque											1.28					1.3
Specialty Primer, Sealer, and Undercoater	0.01	0.48	0.07	0.00			10.73	0.00	0.36							11.6
Stains - Clear/Semitransparent	0.00	0.00	0.02	0.03	2.86	0.07	0.68	1.12	0.48	0.51	2.81	0.08	0.03	0.01	0.10	8.8
Stains - Opaque	0.00	0.91	0.11	0.18	0.08	0.01	0.07	0.00			0.00	0.02				1.4
Swimming Pool	0.00	0.00		0.01	0.06		0.14				0.00	0.01		0.00		0.2
Swimming Pool Repair and Maintenance											0.00	0.11				0.1
Traffic Marking	0.01	1.72	2.49	0.01		0.00	0.00	0.01	0.01							4.2
Varnishes - Clear			0.00	0.14	0.27	0.36	1.32	0.03	0.62	0.45	2.06	0.13	0.12	0.04	0.00	5.5
Varnishes - Semitransparent	0.00					0.00	0.01	0.00	0.38	0.04	0.00					0.4

Table B-1: Maximum Ozone Formation Potential (tons/day) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 – 150	151 – 200	201 – 250	251 – 300	301 – 350	351 – 400	401 – 450	451 – 500	501 – 550	551 – 600	601 – 650	651 – 700	>700 g/l	Totals
Waterproofing Concrete/Masonry Sealers	0.03	0.82	0.24	1.56	0.92	1.16	1.99	1.33	0.07		0.00	0.01	0.18	0.27	0.08	8.7
Waterproofing Sealers	0.03	0.15	0.05	0.14	1.93	0.47	0.04	0.01	0.39	0.00		0.20	0.01	0.01	0.00	3.4
Wood Preservatives			0.00	0.00	0.00	0.01	0.94	0.00			0.01			0.00	0.00	1.0
TOTALS:	2.6	50.1	49.2	19.0	17.8	6.9	25.3	21.6	12.1	3.3	11.0	1.6	0.8	4.7	0.6	226.5

Notes:

1. Blanks indicate that no coating sales were reported or inadequate data were reported in a particular 50-gram/liter range.
2. [Maximum Ozone Formation Potential] = \sum [Ingredient Emissions, tons/day]*[MIR, g Ozone/g Ingredient]
3. The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
4. This table includes data from small containers (1 quart or less).
5. This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.

For comparison with Table B-1, Table B-2 contains VOC emissions for each category in 50-gram/liter ranges.

Table B-2: VOC Emissions (tons/day) vs. VOC Regulatory (g/l)

Coating Category	0 – 50 g/l	51 - 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l	Totals
Bituminous Roof	0.02	0.00	0.00		0.13	0.23	0.00	0.00		0.02						0.41
Bituminous Roof Primer	0.00			0.01	0.00		0.17	0.01	0.03	0.03						0.24
Bond Breakers		0.00		0.00		0.12		0.04						0.00	0.01	0.17
Clear Brushing Lacquer													0.00	0.53		0.53
Concrete Curing Compounds	0.00	0.04	0.00	0.02	0.10	0.13	0.09		0.01		0.01	0.00	0.00	0.02		0.43
Driveway Sealer	0.02							0.00	0.02	0.00						0.04
Dry Fog	0.01	0.03	0.01	0.00	0.00	0.06	0.05	0.66								0.82
Faux Finishing	0.00	0.04	0.01	0.00	0.03	0.01	0.14	0.01	0.01		0.00	0.02		0.00	0.08	0.34
Fire Resistive	0.00	0.00					0.01	0.00								0.02
Fire Retardant - Clear										0.00	0.00		0.00			0.00
Fire Retardant - Opaque	0.00	0.00	0.00				0.72									0.72
Flat	0.39	11.44	1.89	0.06	0.00		0.01		0.01	0.00						13.80
Floor	0.00	0.45	0.04	0.04	0.12	0.00	0.00	0.07		0.00						0.72
Form Release Compounds	0.00	0.01	0.00	0.00	0.73				0.00				0.06		0.00	0.80
Graphic Arts				0.00	0.00	0.00	0.00	0.01	0.00							0.02
High Temperature						0.00	0.01	0.01	0.01	0.02	0.00	0.00	0.00			0.05
Industrial Maintenance	0.02	0.07	0.11	0.61	0.99	0.38	0.92	0.47	0.65	0.01	0.00	0.01	0.00		0.00	4.26
Lacquers	0.03	0.00	0.05	0.00	0.03	0.27	0.00	0.01		0.04	1.69	0.23	0.01	1.24	0.00	3.60
Low Solids	0.01	0.04	0.00													0.04
Magnesite Cement									0.09							0.09
Mastic Texture	0.00	0.23	0.02	0.00	0.22			0.05								0.51
Metallic Pigmented	0.01	0.01	0.02	0.00	0.02	0.00	0.02	0.20	1.30	0.57	0.00	0.00		0.00	0.00	2.17
Multi-Color		0.00			0.00					0.00		0.00				0.00

Table B-2: VOC Emissions (tons/day) vs. VOC Regulatory (g/l)

Coating Category	0 – 50 g/l	51 - 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l	Totals
Nonflat - High Gloss	0.01	0.09	0.29	0.58	0.18	0.02	0.03	0.12	0.01	0.01			0.00			1.34
Nonflat - Low Gloss	0.04	1.34	5.11	0.03	0.03	0.00	0.00	0.01	0.01		0.06		0.00			6.64
Nonflat - Medium Gloss	0.09	1.52	7.94	0.37	1.33	0.17	0.00	0.27	0.03	0.01						11.73
Other	0.00	0.01	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00		0.00		0.02
Pre-Treatment Wash Primer			0.00												0.01	0.01
Primer, Sealer, and Undercoater	0.12	0.96	0.94	3.44	0.02	0.04	0.66	0.00	0.02	0.01	0.01	0.00	0.00	0.02	0.17	6.41
Quick Dry Enamel	0.00			0.00	0.07		0.00	2.62	0.53	0.00						3.23
Quick Dry Primer, Sealer, and Undercoater	0.00		0.00	0.01	0.00		0.18		0.83	0.01	0.00					1.02
Roof	0.19	0.08	0.01	0.00	0.08	0.02	0.00	0.00	0.00	0.00						0.39
Rust Preventative	0.00	0.00	0.03	0.01	0.00	0.04	1.01	6.29	0.63	0.66	0.01					8.68
Sanding Sealers	0.00	0.00		0.00	0.00	0.01	0.00		0.06	0.00	0.19	0.10	0.00		0.00	0.37
Shellacs - Clear												0.06	0.18	0.11		0.35
Shellacs - Opaque											0.81					0.81
Specialty Primer, Sealer, and Undercoater	0.00	0.20	0.02	0.00			5.71	0.00	0.29							6.23
Stains - Clear/Semitransparent	0.00	0.00	0.01	0.01	1.90	0.05	0.42	0.40	0.36	0.55	2.43	0.07	0.03	0.01	0.03	6.28
Stains - Opaque	0.00	0.28	0.04	0.07	0.03	0.01	0.04	0.00			0.00	0.00				0.48
Swimming Pool	0.00	0.00		0.01	0.01		0.03				0.00	0.00		0.00		0.04
Swimming Pool Repair and Maintenance											0.00	0.01				0.01
Traffic Marking	0.00	1.12	0.53	0.00		0.00	0.00	0.00	0.00							1.67
Varnishes - Clear			0.00	0.05	0.08	0.15	0.77	0.01	0.51	0.44	1.68	0.09	0.12	0.02	0.00	3.92
Varnishes - Semitransparent	0.00					0.00	0.00	0.00	0.42	0.01	0.00					0.43

Table B-2: VOC Emissions (tons/day) vs. VOC Regulatory (g/l)

Coating Category	0 – 50 g/l	51 - 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l	Totals
Waterproofing Concrete/Masonry Sealers	0.02	0.19	0.27	0.74	0.17	0.35	0.40	0.46	0.03		0.00	0.00	0.02	0.11	0.05	2.81
Waterproofing Sealers	0.02	0.05	0.02	0.06	0.66	0.34	0.02	0.05	0.04	0.00		0.15	0.01	0.00	0.00	1.43
Wood Preservatives			0.00	0.00	0.00	0.00	0.61	0.00			0.01			0.00	0.00	0.62
TOTALS:	1.0	18.2	17.4	6.2	6.9	2.4	12.0	11.8	5.9	2.4	6.9	0.8	0.4	2.1	0.4	94.7

Notes:

- Blanks indicate that no coating sales were reported in a particular 50-gram/liter range.
- $[\text{VOC Emissions, tons/day}] = \sum [\text{VOC Actual, lb VOC/gal}] * [\text{Coating Sales, gals/yr}] * [1 \text{ ton}/2000 \text{ lbs}] * [1 \text{ yr}/365 \text{ days}]$
- This table includes data from small containers (1 quart or less).
- This table does not include emissions of exempt compounds.
- This table does not include emissions from thinning solvents, cleanup solvents, or additives.

Sales-weighted average MIR values (SWAMIRs) provide another way to characterize the overall reactivity of a given category. Table B-3 contains SWAMIRs sorted by category, including a breakdown for solventborne and waterborne formulations. The table also contains SWAMIRs for compliant and non-compliant coatings, based on the VOC limits contained in ARB's 2000 Architectural Coatings SCM. The data in Table B-3 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004. For most SB coatings, SWAMIRs for compliant coatings are lower than those for non-compliant coatings. Data are provided in units of [Lbs Ozone/Lb Coating], which corresponds to the approach that ARB used in the reactivity-based Aerosol Coatings Regulation.

Table B-3: SWAMIRs for All Categories – 2000 SCM Limits (official MIRs)										
SWAMIR (lbs ozone/lb coating) – Large Containers Only										
Coating Category	SCM VOC Limit (g/l)	Solventborne Coatings			Waterborne Coatings			All Coatings		
		Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall
Bituminous Roof	300	0.66	0.96	0.67	0.00		0.00	0.06	0.96	0.06
Bituminous Roof Primer	350	0.79	0.73	0.78	0.20		0.20	0.70	0.73	0.71
Bond Breakers	350		1.55	1.55	0.41	0.20	0.36	0.41	0.23	0.36
Clear Brushing Lacquer	680	1.49		1.49				1.49	0.00	1.49
Concrete Curing Compounds	350	1.42	1.70	1.46	0.09	1.61	0.10	0.15	1.67	0.17
Driveway Sealer	100		0.91	0.91	0.00		0.00	0.00	0.91	0.00
Dry Fog	400	0.50		0.50	0.07		0.07	0.29	0.00	0.29
Faux Finishing	350	0.48	0.55	0.49	0.19	0.31	0.19	0.19	0.32	0.19
Fire Resistive	350	0.57	0.46	0.57	0.02		0.02	0.24	0.46	0.24
Fire Retardant - Clear	650	2.21		2.21				2.21	0.00	2.21
Fire Retardant - Opaque	350	0.32		0.32	0.01		0.01	0.29	0.00	0.29
Flat	100		1.72	1.72	0.06	0.10	0.06	0.06	0.10	0.06
Floor	250	1.31	0.57	1.15	0.35	0.21	0.35	0.39	0.57	0.39
Form Release Compounds	250	0.42	1.14	0.45	0.06		0.06	0.38	1.14	0.40
Graphic Arts	500	0.47		0.47	0.25		0.25	0.37	0.00	0.37
High Temperature	420	0.91	1.40	0.96				0.91	1.40	0.96
Industrial Maintenance	250	0.45	0.88	0.63	0.16	0.36	0.18	0.32	0.81	0.48
Lacquers	550	0.86	0.83	0.85	0.15		0.15	0.59	0.83	0.67
Low Solids	120				0.14		0.14	0.14	0.00	0.14

Table B-3: SWAMIRs for All Categories – 2000 SCM Limits (official MIRs)										
SWAMIR (lbs ozone/lb coating) – Large Containers Only										
Coating Category	SCM VOC Limit (g/l)	Solventborne Coatings			Waterborne Coatings			All Coatings		
		Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall
Magnesite Cement	450	2.26		2.26				2.26	0.00	2.26
Mastic Texture	300	0.16	0.31	0.18	0.09		0.09	0.10	0.31	0.10
Metallic Pigmented	500	1.11	1.55	1.11	0.14		0.14	0.89	1.55	0.89
Multi-Color	250				0.03	0.19	0.03	0.03	0.19	0.03
Nonflat - High Gloss	250	0.41	0.44	0.43	0.15	0.21	0.15	0.15	0.37	0.15
Nonflat - Low Gloss	150		0.54	0.54	0.11	0.20	0.11	0.11	0.20	0.11
Nonflat - Medium Gloss	150		0.32	0.32	0.10	0.17	0.10	0.10	0.18	0.10
Other	100		1.99	1.99	0.00	0.03	0.01	0.00	0.27	0.07
Pre-Treatment Wash Primer	420		1.66	1.66	0.08		0.08	0.08	1.66	0.09
Primer, Sealer, and Undercoater	200	0.20	0.34	0.33	0.11	0.16	0.11	0.11	0.31	0.12
Quick Dry Enamel	250	0.15	0.47	0.47	0.24		0.24	0.23	0.47	0.45
Quick Dry Primer, Sealer, and Undercoater	200	0.43	0.52	0.52	0.01	0.28	0.01	0.12	0.52	0.46
Roof	250	0.65	0.95	0.72	0.04		0.04	0.05	0.95	0.06
Rust Preventative	400	0.55	0.65	0.56	0.17		0.17	0.54	0.65	0.54
Sanding Sealers	350		0.55	0.55	0.13		0.13	0.13	0.55	0.31
Shellacs - Clear	730	1.03		1.03				1.03	0.00	1.03
Shellacs - Opaque	550	0.66		0.66				0.66	0.00	0.66
Specialty Primer, Sealer, and Undercoater	350	0.45	0.40	0.45	0.08		0.08	0.36	0.40	0.36
Stains - Clear/Semitransparent	250	0.36	0.76	0.49	0.12	0.30	0.15	0.29	0.71	0.40
Stains - Opaque	250	0.42	0.55	0.49	0.09	0.17	0.09	0.10	0.42	0.10
Swimming Pool	340	1.21	1.99	1.23	0.17		0.17	0.67	1.99	0.68
Swimming Pool Repair and Maintenance	340		3.49	3.49				0.00	3.49	3.49
Traffic Marking	150	0.41	0.41	0.41	0.05	0.19	0.05	0.11	0.40	0.11
Varnishes - Clear	350	0.58	0.72	0.61	0.25	0.51	0.26	0.39	0.71	0.42
Varnishes - Semitransparent	350	1.24	1.63	1.52	0.13	0.46	0.13	0.32	1.63	0.75

Table B-3: SWAMIRs for All Categories – 2000 SCM Limits (official MIRs)										
SWAMIR (lbs ozone/lb coating) – Large Containers Only										
Coating Category	SCM VOC Limit (g/l)	Solventborne Coatings			Waterborne Coatings			All Coatings		
		Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall	Compliant w/SCM Limit	Non-Compliant	Overall
Waterproofing										
Concrete/Masonry Sealers	400	0.53	1.61	0.57	0.11	0.18	0.11	0.33	1.56	0.35
Waterproofing Sealers	250	0.51	0.66	0.63	0.14	0.09	0.14	0.15	0.53	0.20
Wood Preservatives	350	0.58	1.05	0.58	0.10	0.30	0.13	0.56	0.66	0.56

Notes:

1. Blanks indicate that no coating sales were reported or inadequate data were reported in a particular group.
2. $[\text{Lb Ozone}]/[\text{Lb Coating}] = [\text{Maximum Ozone Formation Potential}]/[\text{Total Coating Mass}]$
3. $[\text{Maximum Ozone Formation Potential}] = \sum [\text{Ingredient Emissions, lbs}] * [\text{MIR, g Ozone/g Ingredient}]$
4. $[\text{Total Coating Mass}] = \sum [\text{Coating Sales Volume, gals}] * [\text{Coating Density, lb/gal}]$
5. The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
6. This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.
7. This table only includes data for large containers (>1 quart), since small containers are exempt from SCM VOC limits.
8. For Bond Breakers, the SWAMIR for compliant coatings is higher than for non-compliant coatings. This is due to the fact that a significant portion of the sales volume contains Amino Methyl Propanol, which has been assigned an "Upper Limit" MIR value of 15.08.

Table B-4 is similar to Table B-3, but it contains SWAMIRs based on the final VOC limits contained in SCAQMD's Rule 1113 for Architectural Coatings. The data in Table B-4 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004. Data are provided in units of [Lbs Ozone/Lb Coating], which corresponds to the approach that ARB used in the reactivity-based Aerosol Coatings Regulation.

Table B-4: SWAMIRs for All Categories – SCAQMD Limits (official MIRs)										
		SWAMIR (lbs ozone/lb coating) – Large Containers Only								
		Solventborne Coatings			Waterborne Coatings			All Coatings		
ARB Coating Category (SCAQMD Category)	SCAQMD VOC Limit (g/l)	Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall
Bituminous Roof (Roof)	50	0.00	0.67	0.67	0.00	0.08	0.00	0.00	0.63	0.06
Bituminous Roof Primer (Roof Primers, Bituminous)	350	0.79	0.73	0.78	0.20		0.20	0.70	0.73	0.71
Bond Breakers	350		1.55	1.55	0.41	0.20	0.36	0.41	0.23	0.36
Clear Brushing Lacquer	275		1.49	1.49				0.00	1.49	1.49
Concrete Curing Compounds	100		1.46	1.46	0.01	0.16	0.10	0.01	0.28	0.17
Driveway Sealer (Traffic)	100		0.91	0.91	0.00		0.00	0.00	0.91	0.00
Dry Fog	150		0.50	0.50	0.03	0.25	0.07	0.03	0.47	0.29
Faux Finishing (Japans/Faux Finishing)	350	0.48	0.55	0.49	0.19	0.31	0.19	0.19	0.32	0.19
Fire Resistive (Fire-Proofing Exterior)	350	0.57	0.46	0.57	0.02		0.02	0.24	0.46	0.24
Fire Retardant - Clear	650	2.21		2.21				2.21	0.00	2.21
Fire Retardant - Opaque (Fire Retardant - Pigmented)	350	0.32		0.32	0.01		0.01	0.29	0.00	0.29
Flat	50		1.72	1.72	0.02	0.07	0.06	0.02	0.07	0.06
Floor	50	0.05	1.25	1.15		0.35	0.35	0.05	0.40	0.39
Form Release Compounds (Default)	250	0.42	1.14	0.45	0.06		0.06	0.38	1.14	0.40
Graphic Arts	500	0.47		0.47	0.25		0.25	0.37	0.00	0.37
High Temperature (High Temperature IM)	420	0.91	1.40	0.96				0.91	1.40	0.96
Industrial Maintenance	100	0.04	0.76	0.63	0.04	0.22	0.18	0.04	0.58	0.48

Table B-4: SWAMIRs for All Categories – SCAQMD Limits (official MIRs)										
SWAMIR (lbs ozone/lb coating) – Large Containers Only										
ARB Coating Category (SCAQMD Category)	SCAQMD VOC Limit (g/l)	Solventborne Coatings			Waterborne Coatings			All Coatings		
		Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall
Lacquers (Clear Wood Finishes - Lacquer; Pigmented Lacquer)	275	0.95	0.84	0.85	0.14	0.38	0.15	0.25	0.83	0.67
Low Solids	120				0.14		0.14	0.14	0.00	0.14
Magnesite Cement	450	2.26		2.26				2.26	0.00	2.26
Mastic Texture (Mastic)	300	0.16	0.31	0.18	0.09		0.09	0.10	0.31	0.10
Metallic Pigmented	500	1.11	1.55	1.11	0.14		0.14	0.89	1.55	0.89
Multi-Color	250				0.03	0.19	0.03	0.03	0.19	0.03
Nonflat - High Gloss	50		0.43	0.43	0.03	0.15	0.15	0.03	0.15	0.15
Nonflat - Low Gloss (Nonflat Coating)	50		0.54	0.54	0.02	0.11	0.11	0.02	0.11	0.11
Nonflat - Medium Gloss (Nonflat Coating)	50		0.32	0.32	0.02	0.11	0.10	0.02	0.11	0.10
Other (Default)	250	1.16	2.03	1.99	0.01	0.23	0.01	0.01	1.47	0.07
Pre-Treatment Wash Primer	420		1.66	1.66	0.08		0.08	0.08	1.66	0.09
Primer, Sealer, and Undercoater	100	0.03	0.34	0.33	0.05	0.15	0.11	0.05	0.16	0.12
Quick Dry Enamel	50		0.47	0.47	0.00	0.24	0.24	0.00	0.45	0.45
Quick Dry Primer, Sealer, and Undercoater	100		0.52	0.52	0.01	0.10	0.01	0.01	0.51	0.46
Roof	50	0.04	0.73	0.72	0.03	0.09	0.04	0.03	0.20	0.06
Rust Preventative	100	0.03	0.56	0.56	0.06	0.18	0.17	0.06	0.54	0.54
Sanding Sealers	275		0.55	0.55	0.13	0.19	0.13	0.13	0.52	0.31
Shellacs - Clear	730	1.03		1.03				1.03	0.00	1.03
Shellacs - Opaque (Shellac - Pigmented)	550	0.66		0.66				0.66	0.00	0.66
Specialty Primer, Sealer, and Undercoater (Specialty	100		0.45	0.45	0.08	0.12	0.08	0.08	0.44	0.36

Table B-4: SWAMIRs for All Categories – SCAQMD Limits (official MIRs)										
SWAMIR (lbs ozone/lb coating) – Large Containers Only										
ARB Coating Category (SCAQMD Category)	SCAQMD VOC Limit (g/l)	Solventborne Coatings			Waterborne Coatings			All Coatings		
		Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall	Compliant with SCAQMD Limit	Non- Compliant	Overall
Primers)										
Stains - Clr/Semi, Exterior/Dual	100	0.04	0.49	0.49	0.03	0.15	0.15	0.04	0.40	0.40
Stains - Clr/Semi, Interior	250	0.52	0.63	0.61	0.15	0.22	0.20	0.40	0.56	0.53
Stains - Opaque, Exterior/Dual	100		0.49	0.49	0.09	0.11	0.09	0.09	0.15	0.10
Swimming Pool (Swimming Pool - Other)	340	1.21	1.99	1.23	0.17		0.17	0.67	1.99	0.68
Swimming Pool Repair and Maintenance (Swimming Pool - Repair)	340		3.49	3.49				0.00	3.49	3.49
Traffic Marking (Traffic)	100	0.17	0.41	0.41	0.06	0.05	0.05	0.06	0.26	0.11
Varnishes - Clear (Varnish)	275	0.24	0.62	0.61	0.24	0.29	0.26	0.24	0.52	0.42
Varnishes - Semitransparent (Varnish)	275		1.52	1.52	0.13	0.14	0.13	0.13	1.40	0.75
Waterproofing Concrete/Masonry Sealers	100	0.29	0.60	0.57	0.07	0.15	0.11	0.11	0.44	0.35
Waterproofing Sealers	100	0.01	0.69	0.63	0.03	0.19	0.14	0.03	0.27	0.20
Wood Preservatives	350	0.58	1.05	0.58	0.10	0.30	0.13	0.56	0.66	0.56

Notes:

1. Blanks indicate that no coating sales were reported or inadequate data were reported in a particular group.
2. $[\text{Lb Ozone}]/[\text{Lb Coating}] = [\text{Maximum Ozone Formation Potential}]/[\text{Total Coating Mass}]$
3. $[\text{Maximum Ozone Formation Potential}] = \sum [\text{Ingredient Emissions, lbs}] * [\text{MIR, g Ozone/g Ingredient}]$
4. $[\text{Total Coating Mass}] = \sum [\text{Coating Sales Volume, gals}] * [\text{Coating Density, lb/gal}]$
5. The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
6. This table only includes data for large containers (>1 quart), since small containers are exempt from SCM VOC limits.
7. This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.

Table B-5 contains the sales-weighted average MIR values in 50-g/l ranges. The data in Table B-5 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004. Data are provided in units of [Lbs Ozone/Lb Coating], which corresponds to the approach that ARB used in the reactivity-based Aerosol Coatings Regulation.

Table B-5: Sales-Weighted Average MIR (lbs ozone/LB COATING) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Bituminous Roof	0.00	0.08	0.76		0.95	0.46	0.68	0.00		0.98					
Bituminous Roof Primer	0.00			0.20	0.47		0.79	0.81	0.75	0.67					
Bond Breakers		0.08		0.06		0.42		0.20						1.29	1.63
Clear Brushing Lacquer													1.01	1.49	
Concrete Curing Compounds	0.00	0.01	0.05	0.06	0.16	0.16	1.14		1.60		0.50	1.33	4.96	2.62	
Driveway Sealer	0.00							0.75	0.91	1.30					
Dry Fog	0.02	0.04	0.08	0.10	0.15	0.27	0.39	0.51							
Faux Finishing	0.01	0.05	0.09	0.19	0.25	0.27	0.32	0.31	0.53		0.52	0.76		0.90	0.95
Fire Resistive	0.02	0.18					0.69	0.46							
Fire Retardant - Clear										3.00	1.08		4.60		
Fire Retardant - Opaque	0.01	0.00	0.06				0.32								
Flat	0.02	0.06	0.10	0.13	0.28		1.76		0.22	0.48					
Floor	0.05	0.37	0.12	0.13	1.26	0.21	0.39	0.57		0.87					
Form Release Compounds	0.00	0.10	0.06	0.28	0.41				1.14				1.16		0.85
Graphic Arts				0.22	0.28	0.33	0.40	0.35	0.46						
High Temperature						0.67	1.16	0.85	0.72	0.51	1.66	0.96	3.67		
Industrial Maintenance	0.02	0.10	0.18	0.31	0.61	0.74	0.69	0.98	0.98	1.33	1.79	2.75	2.18		2.15
Lacquers	0.02	0.05	0.15	0.30	0.28	0.53	0.35	0.53		0.52	0.85	0.78	1.28	0.85	3.61
Low Solids	0.09	0.16	0.30												
Magnesite Cement									2.26						
Mastic Texture	0.01	0.09	0.12	0.20	0.16			0.31							
Metallic Pigmented	0.17	0.35	0.09	0.08	0.56	0.32	0.54	0.66	1.27	1.02	0.98	2.24		4.61	4.59
Multi-Color		0.01			0.11					0.19		0.67			
Nonflat - High Gloss	0.03	0.05	0.15	0.18	0.19	0.21	0.39	0.47	0.57	1.78			3.81		
Nonflat - Low Gloss	0.02	0.08	0.12	0.13	0.19	0.24	0.37	0.41	0.45		0.32		2.95		
Nonflat - Medium Gloss	0.02	0.06	0.12	0.13	0.19	0.28	0.31	0.40	0.69	0.52					
Other	0.00	0.01	0.02		1.16	0.26	0.58	0.23	1.25	0.63	2.29	0.75		1.55	
Pre-Treatment Wash Primer			0.08												1.80

Table B-5: Sales-Weighted Average MIR (lbs ozone/LB COATING) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 - 50 g/l	51 - 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Primer, Sealer, and Undercoater	0.02	0.05	0.12	0.17	0.40	0.21	0.30	0.53	1.01	0.62	0.61	1.40	1.09	1.03	0.82
Quick Dry Enamel	0.00			0.22	0.23		0.30	0.48	0.41	1.88					
Quick Dry Primer, Sealer, and Undercoater	0.01		0.10	0.37	0.40		0.49		0.53	0.63	2.37				
Roof	0.03	0.08	0.33	0.43	0.65	0.95	1.01	0.86	2.37	0.58					
Rust Preventative	0.04	0.06	0.10	0.25	0.15	0.27	0.63	0.54	0.63	0.53	1.08				
Sanding Sealers	0.00	0.08		0.14	0.18	0.21	0.21		0.48	0.98	0.63	1.40	1.28		2.55
Shellacs - Clear												0.92	1.04	1.10	
Shellacs - Opaque											0.66				
Specialty Primer, Sealer, and Undercoater	0.03	0.08	0.12	0.13			0.45	0.31	0.40						
Stains - Clear/Semitransparent	0.04	0.03	0.09	0.12	0.30	0.32	0.50	0.96	0.44	0.54	0.66	0.74	0.66	0.78	2.67
Stains - Opaque	0.02	0.09	0.10	0.12	0.20	0.17	0.44	0.19			3.18	3.35			
Swimming Pool	0.04	0.09		0.11	0.69		1.30				2.78	1.95		2.12	
Swimming Pool Repair and Maintenance											3.37	3.50			
Traffic Marking	0.02	0.06	0.25	0.32		0.32	0.51	0.46	0.61						
Varnishes - Clear			0.10	0.16	0.28	0.27	0.60	0.84	0.59	0.56	0.73	0.98	0.68	1.74	1.76
Varnishes - Semitransparent	0.01					0.13	1.21	0.37	0.43	1.64	1.97				
Waterproofing Concrete/Masonry Sealers	0.02	0.13	0.10	0.22	0.84	0.64	0.88	0.51	0.68		0.79	1.09	3.82	1.48	1.11
Waterproofing Sealers	0.01	0.10	0.13	0.12	0.22	0.41	0.20	0.03	1.44	0.83		0.96	0.79	2.97	1.66
Wood Preservatives			0.11	0.12	0.05	0.14	0.57	0.30			1.05			0.00	1.04

Notes:

- Blanks indicate that no coating sales were reported or inadequate data were reported in a particular 50-gram/liter range.
- $[\text{Lb Ozone}]/[\text{Lb Coating}] = [\text{Maximum Ozone Formation Potential}]/[\text{Total Coating Mass}]$
- $[\text{Maximum Ozone Formation Potential}] = \sum [\text{Ingredient Emissions, lbs}] * [\text{MIR, g Ozone/g Ingredient}]$
- $[\text{Total Coating Mass}] = \sum [\text{Coating Sales Volume, gals}] * [\text{Coating Density, lb/gal}]$
- The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
- This table includes data from small containers (1 quart or less).
- This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.

Table B-6 contains the sales-weighted average MIR values in 50-g/l ranges. The data in Table B-6 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004. Data are provided in units of [Lbs Ozone/Gallon Solids], which is similar to the format that is used for current architectural coating rules that have VOC limits expressed in VOC Regulatory, less water and exempt compounds.

Table B-6: Sales-Weighted Average MIR (lbs ozone/GALLON SOLIDS) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 - 50 g/l	51 - 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Bituminous Roof	0.02	0.42	2.00		5.31	2.93	4.66	0.00		9.05					
Bituminous Roof Primer	0.00			1.62	2.71		3.53	5.75	6.16	5.20					
Bond Breakers		2.43		0.61		3.80		2.45						31.02	59.36
Clear Brushing Lacquer													3.51	4.60	
Concrete Curing Compounds	0.01	0.23	2.23	0.95	1.83	2.19	9.79		12.13		4.85	5.71	27.66	30.56	
Driveway Sealer	0.01							5.61	6.69	8.74					
Dry Fog	0.14	0.16	0.39	0.72	0.86	0.83	0.90	1.24							
Faux Finishing	0.08	0.20	0.49	0.63	1.59	1.15	2.13	2.41	1.61		4.83	5.78		11.71	20.69
Fire Resistive	0.10	1.14					1.72	2.40							
Fire Retardant - Clear										30.68	4.49		73.21		
Fire Retardant - Opaque	0.08	0.00	0.49				1.26								
Flat	0.15	0.33	0.42	0.77	1.03		14.87		0.95	2.28					
Floor	0.26	2.63	0.63	0.56	7.40	1.14	0.91	2.12		4.21					
Form Release Compounds	0.01	0.28	0.48	0.87	1.75				10.67				3.83		0.00
Graphic Arts				0.64	0.91	0.96	1.44	1.16	1.40						
High Temperature						1.93	6.15	2.88	2.75	4.45	4.64	1.65	24.67		
Industrial Maintenance	0.05	0.38	0.66	0.81	1.84	2.11	2.25	2.48	2.06	3.60	14.94	14.67	16.14		45.95
Lacquers	0.25	0.32	0.82	1.11	1.16	1.16	1.37	1.34		5.57	2.90	3.07	4.53	4.03	59.90
Low Solids	1.59	1.75	8.35												
Magnesite Cement									12.08						
Mastic Texture	0.04	0.40	0.59	0.84	0.73			2.37							
Metallic Pigmented	1.60	0.90	0.52	0.55	1.60	1.96	3.21	3.66	5.75	6.78	2.99	12.45		71.62	79.29
Multi-Color		0.17			0.96					1.57		6.91			
Nonflat - High Gloss	0.21	0.26	0.62	0.81	1.04	0.89	0.98	1.32	1.27	2.56			34.83		
Nonflat - Low Gloss	0.16	0.34	0.58	0.73	1.13	1.46	0.86	0.86	1.17		2.13		16.47		
Nonflat - Medium Gloss	0.14	0.28	0.58	0.73	1.07	1.16	1.09	1.63	3.26	1.12					
Other	0.06	0.08	0.45		0.00	1.77	2.65	1.70	6.62	2.34	5.28	2.72		18.08	

Table B-6: Sales-Weighted Average MIR (lbs ozone/GALLON SOLIDS) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Pre-Treatment Wash Primer			0.48												12.75
Primer, Sealer, and Undercoater	0.14	0.32	0.59	0.82	1.99	1.40	1.45	2.50	5.67	3.81	3.18	12.32	22.16	6.96	16.90
Quick Dry Enamel	0.04			1.27	1.08		1.16	1.43	2.00	4.73					
Quick Dry Primer, Sealer, and Undercoater	0.06		0.14	1.91	1.55		0.87		1.84	8.64	13.19				
Roof	0.16	0.35	1.24	1.05	3.07	1.54	3.12	2.15	11.62	7.96					
Rust Preventative	0.05	0.44	0.41	0.69	0.62	1.29	1.40	1.23	2.28	2.01	3.50				
Sanding Sealers	0.07	0.30		0.84	1.13	2.19	1.98		1.14	3.20	4.96	12.95	7.94		22.87
Shellacs - Clear												4.18	7.14	10.44	
Shellacs - Opaque											4.08				
Specialty Primer, Sealer, and Undercoater	0.07	0.17	0.40	0.82			2.00	1.71	1.72						
Stains - Clear/Semitransparent	0.15	0.53	0.70	0.67	0.61	0.80	1.23	1.70	3.09	2.29	2.71	5.67	8.37	16.44	157.04
Stains - Opaque	0.14	0.34	0.45	0.68	1.16	0.66	1.24	1.60			13.72	11.15			
Swimming Pool	0.10	0.70		0.81	3.44		4.75				17.76	7.91		17.47	
Swimming Pool Repair and Maintenance											11.00	33.04			
Traffic Marking	0.11	0.31	1.83	2.44		1.29	1.35	1.77	2.52						
Varnishes - Clear			0.49	0.78	1.53	1.58	1.42	3.11	2.12	2.60	3.86	9.15	11.06	7.48	7.72
Varnishes - Semitransparent	0.07					1.67	1.68	2.55	1.90	4.36	5.66				
Waterproofing															
Concrete/Masonry Sealers	0.08	0.71	0.25	1.52	4.13	2.24	4.31	3.23	2.49		24.64	5.78	28.97	9.22	22.85
Waterproofing Sealers	0.08	0.87	0.67	1.04	0.85	0.58	1.55	0.45	9.04	3.41		2.46	10.80	19.24	48.34
Wood Preservatives			0.62	0.78	1.45	4.22	2.04	9.80			7.73			0.00	18.69

Notes:

- Blanks indicate that no coating sales were reported or inadequate data were reported in a particular 50-gram/liter range.
- $[\text{Lb Ozone}]/[\text{Gal Solids}] = [\text{Maximum Ozone Formation Potential}]/[\text{Total Solids Volume}]$
- $[\text{Maximum Ozone Formation Potential}] = \sum [\text{Ingredient Emissions, lbs}] * [\text{MIR, g Ozone/g Ingredient}]$
- $[\text{Total Solids Volume}] = \sum [\text{Coating Sales Volume, gals}] * [\text{Volume Percent Solids}]$
- The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
- This table includes data from small containers (1 quart or less).
- This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.

Table B-7 contains the overall MIR values in units of [Lb Ozone/Gal Coating] in 50-g/l ranges. As explained in Section 2.4, sales-weighted average MIRs were not calculated for the units of [Lb Ozone/Gal Coating], because the individual sales volumes cancel out in the sales-weighted average equation, as shown below:

$$SWAMIR = \frac{[Sales]_1 * [Lb\ O3/Sales]_1 + [Sales]_2 * [Lb\ O3/Sales]_2 + \dots + [Sales]_n * [Lb\ O3/Sales]_n}{[Sales]_1 + [Sales]_2 + \dots + [Sales]_n}$$

where

[Sales, gals]_i = the sales of product “i”, gallons

[Lb O3/Sales]_i = the [Maximum Ozone Formation Potential, lbs]/[Sales, gals] for each product

n = the total number of coating products

Since sales-weighting is not possible for the units of [Lb Ozone/Gal Coating], we’ve provided the total ozone over the total gallons in Table B-7. The data in Table B-7 are based on the official MIR values published in ARB’s Aerosol Coatings regulation, as updated in July 2004.

Table B-7: Overall MIR (lbs ozone/GALLON COATING) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Bituminous Roof	0.03	0.72	6.87		8.40	3.94	5.21			7.15					
Bituminous Roof Primer	0.00			1.70	3.72		5.99	6.10	5.66	4.99					
Bond Breakers		0.70		0.52		3.46		1.65						10.60	10.86
Clear Brushing Lacquer													7.99	11.16	
Concrete Curing Compounds	0.01	0.12	0.44	0.52	1.38	1.32	9.61		13.10		3.66	9.59	38.45	19.21	
Driveway Sealer	0.01							5.78	6.67	9.44					
Dry Fog	0.23	0.46	0.84	1.13	1.68	3.52	5.17	5.86							
Faux Finishing	0.15	0.56	1.10	1.57	2.25	2.67	2.87	2.92	4.85		5.00	7.26		7.95	8.28
Fire Resistive	0.19	2.10					7.34	5.07							
Fire Retardant - Clear										28.84	8.53		39.59		
Fire Retardant - Opaque	0.15	0.00	0.71				3.65								
Flat	0.28	0.70	1.11	1.51	2.96		19.05		2.45	4.57					
Floor	0.51	3.65	1.21	1.33	11.36	2.11	3.69	5.36		6.66					
Form Release Compounds	0.02	0.76	0.52	2.13	3.04				9.11				8.47		5.90
Graphic Arts				2.12	2.65	2.94	3.47	4.15	4.69						

Table B-7: Overall MIR (lbs ozone/GALLON COATING) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
High Temperature						9.66	12.12	10.61	7.21	4.80	14.80	8.13	34.23		
Industrial Maintenance	0.19	1.01	1.91	3.41	6.69	8.74	7.43	10.10	10.19	10.82	24.16	31.74	18.68		15.62
Lacquers	0.24	0.54	1.74	3.20	2.51	4.32	2.98	4.63		3.79	6.86	5.98	10.78	6.34	28.32
Low Solids	0.76	1.32	2.56												
Magnesite Cement									20.12						
Mastic Texture	0.10	0.96	1.34	2.11	1.52			2.71							
Metallic Pigmented	1.60	4.04	0.81	0.92	5.93	5.94	13.42	6.21	10.87	8.79	8.30	20.94		43.40	44.48
Multi-Color		0.12			1.01					1.59		5.67			
Nonflat - High Gloss	0.33	0.46	1.47	1.88	1.92	2.04	3.71	4.34	4.86	18.42			30.01		
Nonflat - Low Gloss	0.25	0.82	1.29	1.43	1.90	2.49	4.06	4.64	4.58		3.40		27.57		
Nonflat - Medium Gloss	0.24	0.58	1.17	1.31	1.95	2.76	3.53	4.32	6.52	4.90					
Other	0.03	0.08	0.16		13.91	2.20	5.34	1.97	10.93	6.77	22.58	7.32		11.63	
Pre-Treatment Wash Primer			0.74												13.42
Primer, Sealer, and Undercoater	0.22	0.60	1.32	1.79	3.79	2.15	3.40	5.24	9.19	5.99	4.52	10.71	7.31	7.02	5.40
Quick Dry Enamel	0.05			2.17	2.38		3.04	4.69	3.92	14.42					
Quick Dry Primer, Sealer, and Undercoater	0.06		1.07	3.66	3.62		6.08		5.52	5.83	16.62				
Roof	0.28	0.86	3.62	4.00	6.67	9.77	10.50	6.98	23.69	6.36					
Rust Preventative	0.06	0.66	0.86	2.95	1.48	3.25	6.44	5.44	5.82	4.55	11.44				
Sanding Sealers	0.03	0.68		1.22	1.58	1.81	1.78		3.66	6.97	4.57	10.51	8.96		19.07
Shellacs - Clear												7.07	7.68	7.99	
Shellacs - Opaque											6.40				
Specialty Primer, Sealer, and Undercoater	0.29	0.85	1.20	1.19			5.32	3.64	4.39						
Stains - Clear/Semitransparent	0.33	0.25	0.83	1.05	2.31	2.57	3.82	8.16	3.42	3.86	4.83	5.23	4.78	5.44	19.62
Stains - Opaque	0.18	0.92	1.02	1.20	2.21	1.65	4.80	1.67			30.31	31.54			
Swimming Pool	0.41	1.11		1.25	8.06		15.05				30.23	20.69		17.47	
Swimming Pool Repair and Maintenance											35.39	36.44			
Traffic Marking	0.21	0.77	3.20	3.99		4.85	6.29	5.73	6.41						
Varnishes - Clear			0.91	1.42	2.43	2.34	4.75	6.96	4.45	4.12	5.32	6.84	5.06	12.45	13.00
Varnishes - Semitransparent	0.12					1.13	9.48	3.56	3.27	15.98	18.16				

Table B-7: Overall MIR (lbs ozone/GALLON COATING) vs. VOC Regulatory (g/l) (official MIRs)

Coating Category	0 – 50 g/l	51 – 100	101 - 150	151 - 200	201 - 250	251 - 300	301 - 350	351 - 400	401 - 450	451 - 500	501 - 550	551 - 600	601 - 650	651 - 700	>700 g/l
Waterproofing Concrete/Masonry Sealers	0.23	1.42	0.95	2.15	8.68	6.90	8.69	4.48	7.69		4.93	9.22	28.97	11.15	8.20
Waterproofing Sealers	0.07	1.02	1.45	1.22	1.94	2.84	1.63	0.27	11.96	6.14		6.51	5.32	22.86	11.24
Wood Preservatives			1.02	1.03	0.45	1.21	4.11	2.56			7.21				10.71

Notes:

1. Blanks indicate that no coating sales were reported or inadequate data were reported in a particular 50-gram/liter range.
2. $[\text{Lb Ozone}]/[\text{Gal Coating}] = [\text{Maximum Ozone Formation Potential}]/[\text{Total Coating Volume}]$
3. $[\text{Maximum Ozone Formation Potential}] = \sum [\text{Ingredient Emissions, lbs}] * [\text{MIR, g Ozone/g Ingredient}]$
4. $[\text{Total Coating Volume}] = \sum [\text{Coating Sales Volume, gals}]$
5. The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
6. This table includes data from small containers (1 quart or less).
7. This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.

The following table focuses on the ingredients that are the primary contributors to either VOC emissions or maximum potential ozone totals for selected categories. Table B-8 only lists ingredients that represent more than 10% of the total maximum potential ozone for a category or ingredients that represent more than 10% by weight of the total volatile ingredients (excluding water). It highlights categories where it may be possible to replace a more reactive ingredient with one that is less reactive. The data in Table B-8 are based on the official MIR values published in ARB's Aerosol Coatings regulation, as updated in July 2004.

Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone (official MIRs)

Category	CAS	Ingredient	MIR (g O ³ / g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
Bituminous Roof		Bin 22 Hydrocarbon Solvent	7.51	0.06	0.44	14%	39%
		Bin 15 Hydrocarbon Solvent	1.82	0.32	0.59	78%	52%
Bituminous Roof Primer		Bin 6 Hydrocarbon Solvent	1.41	0.06	0.08	25%	17%
		Bin 14 Hydrocarbon Solvent	1.21	0.03	0.04	12%	7%
		Bin 15 Hydrocarbon Solvent	1.82	0.11	0.20	46%	40%
		Bin 22 Hydrocarbon Solvent	7.51	0.02	0.13	7%	26%
Bond Breakers		Bin 15 Hydrocarbon Solvent	1.82	0.04	0.06	21%	8%
		Bin 22 Hydrocarbon Solvent	7.51	0.01	0.09	7%	11%
	107211	Ethylene Glycol	3.63	0.02	0.07	11%	9%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.03	0.44	17%	58%
	141786	Ethyl Acetate	0.64	0.02	0.01	11%	1%
	7664417	Ammonia	0.00	0.03	0.00	15%	0%
Clear Brushing Lacquer	111762	2-Butoxy Ethanol	2.90	0.07	0.21	14%	20%
	1330207	Xylene	7.48	0.03	0.21	5%	20%
	110430	Methyl-n-Amyl Ketone	2.80	0.07	0.21	14%	20%
	71363	n-Butanol	3.34	0.04	0.13	8%	13%
		Bin 6 Hydrocarbon Solvent	1.41	0.06	0.09	12%	8%
		Bin 12 Hydrocarbon Solvent	0.81	0.12	0.10	23%	9%
	97858	Isobutyl Isobutyrate	0.61	0.09	0.05	17%	5%
Concrete Curing Compounds		Bin 22 Hydrocarbon Solvent	7.51	0.10	0.78	25%	50%
	111762	2-Butoxy Ethanol	2.90	0.05	0.15	13%	10%
		Bin 15 Hydrocarbon Solvent	1.82	0.15	0.28	37%	18%

Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone (official MIRs)

Category	CAS	Ingredient	MIR (g O ³ /g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
Driveway Sealer	4719044	Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	2.73	0.01	0.03	27%	34%
		Bin 15 Hydrocarbon Solvent	1.82	0.02	0.04	64%	53%
	9981	Aggregated VOCs < 0.1%	2.73	0.00	0.01	8%	10%
Dry Fog		Bin 11 Hydrocarbon Solvent	0.91	0.13	0.12	16%	7%
		Bin 5 Hydrocarbon Solvent	2.56	0.30	0.77	37%	45%
		Bin 6 Hydrocarbon Solvent	1.41	0.14	0.20	17%	12%
Faux Finishing	57556	Propylene Glycol	2.75	0.13	0.36	39%	38%
	107211	Ethylene Glycol	3.63	0.09	0.33	27%	35%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.01	0.10	2%	10%
	25265774	2,2,4-Trimethyl-1,3-Pentenediol Isobutyrate	0.89	0.05	0.05	15%	5%
Fire Resistive	78933	Methyl Ethyl Ketone	1.49	0.01	0.01	36%	21%
	108883	Toluene	3.97	0.01	0.03	43%	65%
Fire Retardant - Clear	67630	Isopropanol	0.71	0.00	0.00	12%	2%
		Bin 22 Hydrocarbon Solvent	7.51	0.00	0.01	47%	77%
		Bin 11 Hydrocarbon Solvent	0.91	0.00	0.00	14%	3%
Fire Retardant - Opaque	1330207	Xylene	7.48	0.02	0.17	3%	19%
		Bin 11 Hydrocarbon Solvent	0.91	0.68	0.62	95%	69%
Flat	57556	Propylene Glycol	2.75	1.84	5.05	13%	14%
	107211	Ethylene Glycol	3.63	3.48	12.65	25%	34%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.61	9.19	4%	25%
	25265774	2,2,4-Trimethyl-1,3-Pentenediol Isobutyrate	0.89	6.46	5.75	47%	16%
Floor	9986	Unknown	2.73	1.36	3.72	63%	59%
	29911271	Dipropylene Glycol Monopropyl Ether	2.13	0.24	0.51	11%	8%
		Bin 22 Hydrocarbon Solvent	7.51	0.12	0.88	5%	14%
Form Release Compounds	68476302	Fuel oil no. 2	1.59	0.18	0.29	22%	22%
	64741442	Straight-Run Middle Distillate	1.59	0.49	0.78	60%	59%
Graphic Arts		Bin 14 Hydrocarbon Solvent	1.21	0.01	0.02	89%	74%

Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone (official MIRs)

Category	CAS	Ingredient	MIR (g O ³ /g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
High Temperature	1330207	Xylene	7.48	0.01	0.05	10%	38%
		Bin 11 Hydrocarbon Solvent	0.91	0.02	0.02	33%	15%
		Bin 23 Hydrocarbon Solvent	8.07	0.00	0.02	3%	13%
	98566	4-Chlorobenzotrifluoride	0.11	0.02	0.00	24%	1%
	110430	Methyl-n-Amyl Ketone	2.80	0.01	0.02	9%	13%
Industrial Maintenance	1330207	Xylene	7.48	0.67	5.01	15%	34%
		Bin 11 Hydrocarbon Solvent	0.91	0.59	0.54	14%	4%
Lacquers	67641	Acetone	0.43	4.02	1.73	55%	19%
	111762	2-Butoxy Ethanol	2.90	0.33	0.94	4%	10%
	123864	Butyl Acetate, 1-	0.89	0.87	0.78	12%	8%
	1330207	Xylene	7.48	0.18	1.34	2%	15%
Low Solids	111762	2-Butoxy Ethanol	2.90	0.01	0.01	11%	14%
	121448	Triethylamine	16.60	0.00	0.01	1%	10%
	107211	Ethylene Glycol	3.63	0.01	0.03	20%	31%
		Bin 11 Hydrocarbon Solvent	0.91	0.02	0.02	42%	16%
Magnesite Cement	67641	Acetone	0.43	0.08	0.03	46%	5%
	1330207	Xylene	7.48	0.03	0.24	19%	34%
		Bin 23 Hydrocarbon Solvent	8.07	0.05	0.43	32%	60%
Mastic Texture		Bin 11 Hydrocarbon Solvent	0.91	0.25	0.23	50%	23%
	57556	Propylene Glycol	2.75	0.18	0.49	36%	49%
	107211	Ethylene Glycol	3.63	0.03	0.12	6%	12%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.01	0.12	2%	12%
Metallic Pigmented		Bin 22 Hydrocarbon Solvent	7.51	0.32	2.43	15%	40%
		Bin 15 Hydrocarbon Solvent	1.82	1.35	2.45	62%	40%
Multi-Color	8052413	Stoddard Solvent	1.59	0.00	0.00	18%	17%
	25265774	2,2,4-Trimethyl-1,3-Pentandiol Isobutyrate	0.89	0.00	0.00	54%	29%
	111762	2-Butoxy Ethanol	2.90	0.00	0.00	25%	43%
Nonflat - High Gloss	57556	Propylene Glycol	2.75	0.17	0.48	13%	13%
	107211	Ethylene Glycol	3.63	0.35	1.26	26%	33%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.05	0.79	4%	21%
	5444757	2-Ethylhexyl Benzoate	2.73	0.17	0.46	13%	12%
	25265774	2,2,4-Trimethyl-1,3-Pentandiol Isobutyrate	0.89	0.33	0.30	25%	8%

Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone (official MIRs)

Category	CAS	Ingredient	MIR (g O ³ / g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
Nonflat - Low Gloss	57556	Propylene Glycol	2.75	0.93	2.56	14%	14%
	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	1.94	1.72	29%	9%
	107211	Ethylene Glycol	3.63	2.61	9.47	39%	51%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.15	2.26	2%	12%
Nonflat - Medium Gloss	57556	Propylene Glycol	2.75	2.70	7.41	23%	25%
	107211	Ethylene Glycol	3.63	3.31	12.02	28%	41%
	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	3.83	3.41	33%	12%
Other	1330207	Xylene	7.48	0.01	0.04	25%	49%
	108883	Toluene	3.97	0.00	0.01	11%	11%
Pre-Treatment Wash Primer	111762	2-Butoxy Ethanol	2.90	0.00	0.00	9%	12%
	108101	Methyl Isobutyl Ketone	4.31	0.00	0.01	17%	34%
	67630	Isopropanol	0.71	0.00	0.00	20%	6%
	71363	n-Butanol	3.34	0.00	0.00	12%	18%
	78933	Methyl Ethyl Ketone	1.49	0.00	0.00	21%	14%
Primer, Sealer, and Undercoater		Bin 11 Hydrocarbon Solvent	0.91	0.76	0.69	12%	4%
	107211	Ethylene Glycol	3.63	2.59	9.41	40%	51%
	124685	2-Amino-2-Methyl-1-Propanol	15.08	0.24	3.68	4%	20%
	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	1.67	1.48	26%	8%
Quick Dry Enamel		Bin 10 Hydrocarbon Solvent	2.03	0.34	0.70	11%	15%
		Bin 11 Hydrocarbon Solvent	0.91	2.33	2.12	72%	46%
Quick Dry Primer, Sealer, and Undercoater		Bin 11 Hydrocarbon Solvent	0.91	0.22	0.20	22%	12%
		Bin 6 Hydrocarbon Solvent	1.41	0.63	0.89	62%	53%
Roof		Bin 6 Hydrocarbon Solvent	1.41	0.07	0.10	17%	9%
	96297	Ethyl Methyl Ketone Oxime	22.04	0.01	0.17	2%	15%
	107211	Ethylene Glycol	3.63	0.11	0.42	28%	36%
	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	0.11	0.10	26%	8%
Rust Preventative		Bin 10 Hydrocarbon Solvent	2.03	1.87	3.79	21%	24%
	1330207	Xylene	7.48	0.25	1.88	3%	12%
		Bin 11 Hydrocarbon Solvent	0.91	3.86	3.51	44%	23%
		Bin 15 Hydrocarbon Solvent	1.82	1.21	2.20	14%	14%

**Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone
(official MIRs)**

Category	CAS	Ingredient	MIR (g O ³ / g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
Sanding Sealers		Bin 11 Hydrocarbon Solvent	0.91	0.22	0.20	59%	38%
		Bin 15 Hydrocarbon Solvent	1.82	0.09	0.16	23%	30%
Shellacs - Clear	64175	Ethanol	1.69	0.30	0.51	86%	92%
	67630	Isopropanol	0.71	0.05	0.03	13%	6%
Shellacs - Opaque	64175	Ethanol	1.69	0.70	1.18	86%	93%
	67630	Isopropanol	0.71	0.11	0.08	13%	6%
Specialty Primer, Sealer, and Undercoater		Bin 22 Hydrocarbon Solvent	7.51	0.62	4.66	10%	40%
		Bin 11 Hydrocarbon Solvent	0.91	4.45	4.05	74%	35%
Stains - Clear/Semitransparent		Bin 11 Hydrocarbon Solvent	0.91	3.87	3.52	59%	40%
Stains - Opaque	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	0.09	0.08	19%	6%
	107211	Ethylene Glycol	3.63	0.22	0.78	43%	56%
Swimming Pool		Bin 22 Hydrocarbon Solvent	7.51	0.01	0.04	12%	18%
	71363	n-Butanol	3.34	0.01	0.02	14%	10%
	1330207	Xylene	7.48	0.01	0.11	33%	50%
Swimming Pool Repair and Maintenance	1330207	Xylene	7.48	0.01	0.10	93%	94%
Traffic Marking	67561	Methanol	0.71	0.65	0.46	24%	11%
	25265774	2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	0.89	0.28	0.25	10%	6%
	1330207	Xylene	7.48	0.24	1.82	9%	43%
	111762	2-Butoxy Ethanol	2.90	0.30	0.86	11%	20%
	67641	Acetone	0.43	0.81	0.35	30%	8%
Varnishes - Clear		Bin 11 Hydrocarbon Solvent	0.91	2.77	2.52	70%	46%
		Bin 15 Hydrocarbon Solvent	1.82	0.41	0.75	10%	14%
Varnishes - Semitransparent		Bin 11 Hydrocarbon Solvent	0.91	0.15	0.14	36%	33%
		Bin 12 Hydrocarbon Solvent	0.81	0.27	0.21	61%	50%
Waterproofing Concrete/Masonry Sealers		Bin 22 Hydrocarbon Solvent	7.51	0.39	2.95	10%	34%
	67641	Acetone	0.43	0.55	0.24	14%	3%
		Bin 6 Hydrocarbon Solvent	1.41	0.65	0.92	16%	11%
	98566	4-Chlorobenzotrifluoride	0.11	0.58	0.06	14%	1%

Table B-8: Ingredients That Contribute the Most to Emissions and Potential Ozone (official MIRs)

Category	CAS	Ingredient	MIR (g O ³ / g ingr)	Ingred. Qty. (tpd)	Max. Ozone (tpd)	% of Total Volatiles For Category	% of Total Max. Ozone From Category
Waterproofing Sealers		Bin 11 Hydrocarbon Solvent	0.91	0.61	0.55	38%	16%
	107211	Ethylene Glycol	3.63	0.12	0.45	8%	13%
	34590948	Dipropylene Glycol Methyl Ether	2.46	0.20	0.48	12%	14%
Wood Preservatives		Bin 15 Hydrocarbon Solvent	1.82	0.06	0.11	10%	11%
		Bin 2 Hydrocarbon Solvent	1.59	0.38	0.61	62%	63%
		Bin 11 Hydrocarbon Solvent	0.91	0.11	0.10	18%	11%

Notes:

1. The values in this table are based on the official MIR values published in ARB's "Regulation for Reducing the Ozone Formed from Aerosol Coating Product Emissions", California Code of Regulations, Title 17, sections 94700 and 94701, as updated July 7, 2004.
2. This table includes data from small containers (1 quart or less).
3. This table includes ozone generated from all volatile emissions, including VOCs and exempt compounds.