

**2004 Architectural Coatings – Solvent Based – 2005 Survey (OG Profile No. 3901)**  
**and**  
**2004 Architectural Coatings – Water Based – 2005 Survey (OG Profile No. 3902)**

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**October 18, 2010**

## **1 Introduction**

Two new organic gas speciation profiles have been developed based on new survey data:

- Profile 3901 for solvent-based architectural coatings; and
- Profile 3902 for water-based architectural coatings.

Architectural coatings are defined as “a coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings”[1].

There are six organic gas speciation profiles for architectural coatings currently used for CARB modeling and emission inventory purposes. The profiles are:

<b>OG Profile No.</b>	<b>Profile Name</b>
196	Architectural Surface Coatings – Composite Solvent
717	Architectural Surface Coatings – Water Based Paint
1901	Draft Architectural Coatings: Solvent Borne (1998 Survey)
1902	Draft Architectural Coatings: Water Borne (1998 Survey)
2901	2001 Architectural Coatings – Solvent Based – 2000 Survey
2902	2001 Architectural Coatings – Water Based – 2000 Survey

CARB typically conducts architectural coating surveys every four or five years. The OG Profiles 1901/1902 and 2901/2902 were created using the information collected during the surveys conducted in 1998 and 2001, respectively. In 2005 ARB conducted a new survey, and the survey response accurately represented the sales volume based on the comparisons between the survey data and manufacturing data compiled by the US Census Bureau.

Based on the 2005 survey data, about 110 million gallons of architectural coatings were sold in California during 2004, with 88% of that volume coming from water-borne products and 12% from solvent-borne products. VOC emissions from these coatings are approximately 95 annual-average tons per day statewide. Water-borne products

generate 48% of these emissions, while the solvent-borne products generate 52%. The survey gathered speciation data for all volatile ingredients (VOCs, exempt compounds, and water) that amounted to at least 0.1% by weight of each coating. These data[1] are used to develop two new ARB's speciation profiles: profile 3901 for solvent-based architectural coatings and profile 3902 for water-based architectural coatings.

## 2 Methodology

The sales quantities reported in Chapter 10 of the final survey report[1] are used to develop speciation profiles. The procedures are described as follows:

1. Summarize all of the volatile ingredients, including VOCs and exempt compounds for solvent-borne and water-borne coatings, separately;
2. Group the ingredients that were reported in small quantities together under lumped species named as "distillates/naphtha/mineral spirits", "glycol esters and their acetates", "other miscellaneous VOC compounds aggregated in profile" and "other miscellaneous exempt compounds aggregated in profile";
3. Sum up the quantities of all organic species and lumped species as the total organic gases quantity. Then divide the quantity of each species or lumped species by the total organic gases quantity to get their weight fractions.

## 3 Results and Discussion

For some of the chemical species reported in the survey, there are no ARB SAROAD codes assigned in the existing CEIDARS POLLUTANT table and chem3.d table. The new ARB SAROAD codes that will need to be added to the current POLLUTANT table and chem3.d file are listed in Table 1.

**Table 1. New ARB SAROAD Codes to be Added to the CEIDARS POLLUTANT Table**

ARB SAROAD	CAS	Chemical Name	Formula	Molecular Weight
99476	149735	Trimethoxymethane	C4H10O3	106.12
99457	590012	Butyl Propionate	C7H14O2	130.2
99458	4253343	Methyltriacetoxysilane	C7H12O6Si	220.25
99459	4420740	(3-Mercaptopropyl)trimethoxysilane	C6H16O3SSi	196.37
99461	19549805	4,6-Dimethyl-2-heptanone	C9H18O	142.24
99466	64742047	Heavy Paraffinic Distillate Solvent Extract		
99468	64742489	Hydrotreated Heavy Naphtha		
99472	68154643	Fatty Acids		
99475	68476346	Fuels, diesel, no. 2		
99481	2171962	Methoxysilane	CH6OSil	62.15
99485	15821837	2-Butoxy-1-Propanol	C7H16O2	132.23

The following two species have valid CAS and ARB SAROAD codes in the POLLUTANT table, but only ARB SAROAD codes in chem3.d. Their CAS codes need to be added to the chem3.d file.

ARB SAROAD	CAS	Chemical Name
99148	112072	Butoxyethyl Acetate, 2-
99440	108010	n,n-Dimethylethanolamine

The following species have valid CAS and ARB SAROAD codes in the POLLUTANT table, but don't exist in chem3.d file. These species need to be added to chem3.d file.

ARB SAROAD	CAS	Chemical Name
50275	126738	Tributyl Phosphate

The species profiles with chemical names, ARB SAROAD codes, and weight fractions are shown in Table 2 and Table 3.

**Table 2. 2004 Architectural Coatings – Solvent Based – 2005 Survey (OG Profile 3901)**

Chemical Name	ARB SAROAD	Weight Fraction
Methanol	43301	0.00067880
Ethanol	43302	0.02003324
Isopropanol	43304	0.00964539
N-Butanol	43305	0.00256549
1-Propanol, 2-Methyl-	43306	0.00450767
Diacetone Alcohol	43320	0.00008612
Propylene Glycol Monomethyl Ether	43365	0.00112946
Dipropylene Glycol Methyl Ether	43366	0.00012121
Ethylene Glycol	43370	0.00026104
Propylene Glycol Monomethyl Ether Acetate	43431	0.00291792
Methyl Acetate	43432	0.00024048
Ethyl Acetate	43433	0.00007751
Butyl Acetate, 1-	43435	0.01992204
Isobutyl Acetate	43446	0.00053482
Isobutyl Isobutyrate	43451	0.00259071
Acetone	43551	0.10234846
Methyl Ethyl Ketone	43552	0.00234599
Methyl Isobutyl Ketone	43560	0.00242352
Methyl-N-Amyl Ketone	43561	0.01127873
Methylene Chloride	43802	0.00449767
Tetrachloroethylene	43817	0.00151884
Bin 2 Hydrocarbon Solvent	44002	0.00689631
Bin 5 Hydrocarbon Solvent	44005	0.00582329
Bin 6 Hydrocarbon Solvent	44006	0.04623529
Bin 7 Hydrocarbon Solvent	44007	0.00077932
Bin 9 Hydrocarbon Solvent	44009	0.01235026
Bin 10 Hydrocarbon Solvent	44010	0.04431102

Chemical Name	ARB SAROAD	Weight Fraction
Bin 11 Hydrocarbon Solvent	44011	0.38463541
Bin 12 Hydrocarbon Solvent	44012	0.02497041
Bin 14 Hydrocarbon Solvent	44014	0.00921240
Bin 15 Hydrocarbon Solvent	44015	0.08603006
Bin 16 Hydrocarbon Solvent	44016	0.00036733
Bin 21 Hydrocarbon Solvent	44021	0.00024175
Bin 22 Hydrocarbon Solvent	44022	0.03531910
Bin 23 Hydrocarbon Solvent	44023	0.00519211
Bin 24 Hydrocarbon Solvent	44024	0.00026224
1-Nitropropane	44204	0.00026994
Petroleum Ether	44214	0.00020552
Fuel Oil No. 2	44219	0.00324586
Dimethyl Glutarate	99223	0.00007697
Dipropylene Glycol Methyl Ether Acetate	44223	0.00010121
Distillate (Petroleum), Hydrotreated Light	44225	0.00055451
Ethyl Orthoformate	44228	0.00008898
Heavy Straight-Run Naphtha	44231	0.00017001
Hydrotreated Heavy Naphtha	44233	0.00287592
Hydrotreated Heavy Naphthenic Distillate	44234	0.00125708
Hydrotreated Light Naphthenic Distillate	44235	0.00409754
Hydrotreated Light Distillate	44240	0.00007621
Medium Aliphatic Solvent Naphtha	44243	0.00762322
Methyl Isoamyl Ketone	44245	0.00040331
Nitroethane	44250	0.00007590
Straight-Run Middle Distillate	44259	0.00878947
Thiocyanic Acid (2-Benzoathiazolythio)Methyl Ester	44262	0.00059846
Tripropylene Glycol Methyl Ether	44266	0.00041155
Xylene	45102	0.03274956
Trimethyl Benzene (Mixed Isomers)	45107	0.00069438
Toluene	45202	0.00534158
Ethyl Benzene	45203	0.00390949
Ortho-Xylene	45204	0.00009810
Meta-Xylene	45205	0.00027115
Para-Xylene	45206	0.00011022
Mesitylene	45207	0.00117210
1,2,4-Trimethylbenzene	45208	0.00573047
Styrene	45220	0.00006388
Heavy Aromatic Naphtha Solvent	60002	0.00007360
Aromatic 100	60003	0.00013825
Kerosene	60006	0.00622883

Chemical Name	ARB SAROAD	Weight Fraction
D-Limonene	98027	0.00030744
Cumene	98043	0.00015057
Naphthalene	98046	0.00007844
2-Butoxy Ethanol	98074	0.00718032
2-(2-Butoxyethoxy) Ethanol	98110	0.00022585
2-(2-Methoxyethoxy) Ethanol	98123	0.00026541
Cyclohexanol	98127	0.00011797
2-Pentanone	98160	0.00053429
Glycol Ethers (And Their Acetates)	99130	0.00005841
Other Misc Voc Compounds Aggregated In Profile	99146	0.00362685
Other Misc Exempt Compounds Aggregated In Profile	99147	0.00008679
Butoxyethyl Acetate, 2-	99148	0.00017716
Distillates/Naphtha/Mineral Spirits	99151	0.00030911
Ethyl Methyl Ketone Oxime	99183	0.00298473
4-Chlorobenzotrifluoride	99185	0.02095335
Benzyl Alcohol	99187	0.00078822
Propylene Carbonate	99193	0.00405270
2,6-Dimethyl-4-Heptanone	99194	0.00016135
Diethylene Glycol Butyl Ether Acetate	99210	0.00041982
2-Amino-2-Methyl-1-Propanol	99211	0.00014325
Limonene	99214	0.00050251
Tert-Butyl Acetate	99218	0.00012799
Amyl Acetate	99219	0.00017190
Ethyl 3-Ethoxypropionate	99222	0.00060404
Ethylene Glycol Monopropyl Ether	99232	0.00069272
Propylene Glycol Monobutyl Ether	99233	0.00010024
Mineral Oil	99241	0.00117137
2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	99247	0.00045304
Oxohexyl Acetate	99274	0.00022347
Stoddard Solvent	99285	0.00999909
Vm&P Naphtha	99342	0.00212586
Ethylmethylbenzene	99387	0.00016978
Octamethylcyclotetrasiloxane	99396	0.00020732
Butyl Propionate	99457	0.00021555
Methyltriacetoxysilane	99458	0.00013315
(3-Mercaptopropyl)Trimethoxysilane	99459	0.00010678
4,6-Dimethyl-2-Heptanone	99461	0.00006517
Heavy Paraffinic Distillate Solvent Extract	99466	0.00016996
Fatty Acids	99472	0.00013774
Fuels, Diesel, No.2	99475	0.00008298

Chemical Name	ARB SAROAD	Weight Fraction
Trimethoxymethane	99476	0.00006259
<b>Sum Of All</b>		<b>1.00000000</b>

**Table 3. 2004 Architectural Coatings – Water Based – 2005 Survey (OG Profile 3902)**

Chemical Name	ARB SAROAD	Weight Fraction
Methanol	43301	0.01481406
Ethanol	43302	0.00139274
Isopropanol	43304	0.00103103
Butyl Alcohol, Sec-	43314	0.00102050
Propylene Glycol Monomethyl Ether	43365	0.00125444
Dipropylene Glycol Methyl Ether	43366	0.00928516
Propylene Glycol	43369	0.14673256
Ethylene Glycol	43370	0.29289709
Diethylene Glycol	43373	0.00582873
Dipropylene Glycol	43374	0.00089062
Triethylene Glycol	43376	0.00148536
Acetic Acid	43404	0.00011719
Propylene Glycol Monomethyl Ether Acetate	43431	0.00009059
Ethyl Acetate	43433	0.00039558
Acetaldehyde	43503	0.00031359
Bin 6 Hydrocarbon Solvent	44006	0.00058604
Bin 9 Hydrocarbon Solvent	44009	0.00057669
Bin 10 Hydrocarbon Solvent	44010	0.00085470
Bin 11 Hydrocarbon Solvent	44011	0.01069871
Bin 12 Hydrocarbon Solvent	44012	0.00064940
Bin 15 Hydrocarbon Solvent	44015	0.00438186
Bin 21 Hydrocarbon Solvent	44021	0.00008887
Bin 22 Hydrocarbon Solvent	44022	0.00161596
Bin 23 Hydrocarbon Solvent	44023	0.00072252
1-Nitropropane	44204	0.00025324
2(Methylamino)-2-Methyl-1-Propanol	44205	0.00012985
Dipropylene Glycol Monopropyl Ether	44206	0.00541126
2-Ethylhexyl Benzoate	44208	0.00388262
Propylene Glycol Phenyl Ether	44211	0.00054159
4,4-Dimethyloxazolidine	44212	0.00124578
Oxo-Tridecyl Acetate	44218	0.00015168
Paraffinic Distillate	44226	0.00079609
Hexahydro-1,3,5-Tris(2-Hydroxyethyl)-S-Triazine	44232	0.00035207
Hydrotreated Light Naphthenic Distillate	44235	0.00032422
Solvent-Refined Heavy Paraffinic Distillate	44246	0.00129950

Chemical Name	ARB SAROAD	Weight Fraction
Straight-Run Middle Distillate	44259	0.00030023
Triethoxyoctylsilane	44264	0.00040455
Triethylene Glycol Monobutyl Ether	44265	0.00029158
Troysan 174	44267	0.00019366
Xylene	45102	0.00053055
Toluene	45202	0.00037669
Mesitylene	45207	0.00019964
1,2,4-Trimethylbenzene	45208	0.00070317
Tributyl Phosphate	50275	0.00060085
2-Butoxy Ethanol	98074	0.01883770
Diethylene Glycol Monoethyl Ether	98096	0.00030562
2-(2-Butoxyethoxy) Ethanol	98110	0.04719720
2-(2-Methoxyethoxy) Ethanol	98123	0.00599354
1-Methyl-2-Pyrrolidinone	98129	0.00284871
Glycol Ethers (And Their Acetates)	99130	0.00027995
Other Misc Voc Compounds Aggregated In Profile	99146	0.02733936
Other Misc Exempt Compounds Aggregated In Profile	99147	0.00017214
Distillates/Naphtha/Mineral Spirits	99151	0.00038348
Dimethyl Sulfoxide	99172	0.00067608
Ethyl Methyl Ketone Oxime	99183	0.00037053
Gamma-Butyrolactone	99184	0.00021116
Benzyl Alcohol	99187	0.00010754
Triethylamine	99207	0.00044927
Ethylene Glycol Monophenyl Ether	99209	0.00043649
Diethylene Glycol Butyl Ether Acetate	99210	0.00084915
2-Amino-2-Methyl-1-Propanol	99211	0.02836729
Ethylene Glycol Mono-2-Ethyl Hexyl Ether	99228	0.00027792
Propylene Glycol Monopropyl Ether	99229	0.00040119
Ethylene Glycol Monopropyl Ether	99232	0.00195579
Propylene Glycol Monobutyl Ether	99233	0.00208015
2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate	99247	0.33466208
Dipropylene Glycol Monobutyl Ether	99252	0.00884318
Dipropylene Glycol Dimethyl Ether	99276	0.00023762
N,N-Dimethylethanolamine	99440	0.00019722
Methoxysilane	99481	0.00071033
2-Butoxy-1-Propanol	99485	0.00009649
<b>Sum Of All</b>		<b>1.00000000</b>

The 2005 survey reports sales of architectural coatings based on the total weight of TOG and ROG species contained in the solvent-borne and water-borne coatings that were sold. Based on these data, the ROG/TOG ratio is calculated as 0.870 for solvent-borne architectural coatings, and approximately 1.000 for the water-borne architectural coatings. The ratio of VOC/TOG is the same as the ratio of ROG/TOG for these two profiles. The profiles can be used to convert emissions based on THC carbon measurements to TOG. Assuming that mass THC is based on a molecular weight of 16.04 per carbon measured, the TOG/THC conversion factors are 0.997 and 1.561 for Profiles 3901 and 3902, respectively.

<b>Sales-Based Pollutant</b>	<b>Quantity Sold in Solvent-based Coatings (lbs)</b>	<b>Quantity Sold in Water-based Coatings (lbs)</b>
TOG	40,694,805	33,010,787
ROG	35,410,466	33,005,105

<b>Conversion Factors</b>	<b>Profile 3901</b>	<b>Profile 3902</b>
ROG/TOG	0.870	1.000
VOC/TOG	0.870	1.000
TOG/THC	0.997	1.561

## 4 Estimated Impacts of Changes on Emission Inventory

### 4.1 Solvent-Based Architectural Coatings

To facilitate disaggregating calendar-year and category-specific emission inventory estimates of TOG, ROG, or THC into discrete chemical components, profiles are assigned to the related emission inventory categories in a cross-reference table. In the current cross-reference table for years 1975 - 1999, OG Profile 1901 is assigned to all of the categories listed in Tables A1-a and A1-b; for years 2000 - 2003, OG Profile 2901 is assigned to the same categories; for years 2004 and after, OG Profile 1901 is assigned to the categories listed in Table A1-a and Profile 2901 is assigned to the categories listed in Table A1-b. The newly developed Profile 3901 will be assigned to all of the categories (i.e. Tables A1-a & A1-b) for years 2004 and after. Profiles and associated categories are summarized in Table 4.



**Table 4. Summary of Solvent-Based Architectural Coating Profiles and Associated Categories**

Calendar Year	Associated Categories				
	Current		New		
	Profile 1901	Profile 2901	Profile 1901	Profile 2901	Profile 3901
1975-1999	Table A1-a Table A1-b		Table A1-a Table A1-b		
2000-2003		Table A1-a Table A1-b		Table A1-a Table A1-b	
2004 and after	Table A1-a	Table A1-b			Table A1-a Table A1-b

The statewide annual average TOG emissions for the categories assigned to Profiles 1901 and 2901 are 43.71 tons/day, 0.53% of the statewide total TOG emissions, based on the 2009 Almanac data and cross-reference table for 2010. Using the new Profile 3901, the ROG will be 38.03 tons/day, 0.87% of the statewide total ROG emissions, which is 9.71% less than the ROG estimated based on the current profiles.

The impacts of the profile update for solvent-borne architectural coatings on emissions used in SIP modeling are estimated for year 2010 (Table 5). The ozone forming potential (OFP) calculated based on SAPRC07 data is 1.71 for Profile 3901, which is less than the OFP values of 2.30 and 2.14 for Profiles 1901 and 2901, respectively. For toxics, no change is observed for benzene, formaldehyde, 1,3-butadiene, acrolein, and acetaldehyde because they are not included in the three profiles; while emissions of PAHs will decrease 78.35%.

**Table 5. Impacts of Changes on 2010 Emission Inventory Using OG Profile 3901**

Statewide Annual Ave. Emissions (tpd)		Current (No. 1901 & 2901)	New (No. 3901)	Change	
				Emissions (tpd)	Percentage
TOG		43.71	43.71	0	0%
ROG		42.12	38.03	-4.09	-9.71%
Ozone formation potential (MIR) (g O <sub>3</sub> /g ORG)		2.30 & 2.14	1.71	-0.51*	-22.97%
Toxics	Benzene	0	0	0	NA
	Formaldehyde	0	0	0	NA
	1,3-butadiene	0	0	0	NA
	Acrolein	0	0	0	NA
	Acetaldehyde	0	0	0	NA
	PAHs	0.01584	0.00343	-0.01241	-78.35%

\*This value is calculated by subtracting the average of 2.30 and 2.14 from 1.71.

## 4.2 Water-Based Architectural Coatings

In the current cross-reference table, for years 1975 - 1999, OG Profile 1902 is assigned to all of the categories listed in Tables A2-a and A2-b; for years 2000 - 2003, OG Profile 2902 is assigned to the same categories; for years 2004 and after, OG Profile 1902 is assigned to the categories listed in Table A2-a and Profile 2902 is assigned to the categories listed in Table A2-b. The newly developed Profile 3902 will be assigned to all of the categories (i.e. Tables A2-a & A2-b) for years 2004 and after. Profiles and associated categories are summarized in Table 6.

**Table 6. Summary of Water-Based Architectural Coating Profiles and Associated Categories**

Calendar Year	Associated Categories				
	Current		New		
	Profile 1902	Profile 2902	Profile 1902	Profile 2902	Profile 3902
1975-1999	Table A2-a Table A2-b		Table A2-a Table A2-b		
2000-2003		Table A2-a Table A2-b		Table A2-a Table A2-b	
2004 and after	Table A2-a	Table A2-b			Table A2-a Table A2-b

The statewide annual average TOG emissions for the categories assigned to Profiles 1902 and 2902 are 32.48 tons/day, 0.39% of the statewide total TOG emissions, based on the 2009 Almanac data and cross-reference table for year 2010. There is no change to ROG resulting from the update to the Profile 3902. The impacts of the profile update for water-borne architectural coatings on emissions used in SIP modeling are estimated for year 2010 (Table 7). The OFP calculated based on SARPC07 data is 2.09 for Profile 3902, slightly less than the average of the OFP values estimated for Profiles 1902 and 2902. For toxics, no change is observed for benzene, 1,3-butadiene, acrolein, and PAHs because they are not included in the three profiles; emissions of formaldehyde will decrease from 0.00325 tons/day to zero upon the profile update; but emissions of acetaldehyde will increase 20.56%.

**Table 7. Impacts of Changes on 2010 Emission Inventory Using OG Profile 3902**

Statewide Annual Ave. Emissions (tpd)		Current (No. 1902 & 2902)	New (No. 3902)	Change	
				Emissions (tpd)	Percentage
TOG		32.48	32.48	0	0%
ROG		32.48	32.48	0	0%
Ozone formation potential (MIR) (g O <sub>3</sub> /g ORG)		2.06 & 2.20	2.09	-0.04*	-1.88%
Toxics	Benzene	0	0	0	NA
	Formaldehyde	0.00325	0	-0.00325	-100.00%
	1,3-butadiene	0	0	0	NA
	Acrolein	0	0	0	NA
	Acetaldehyde	0.00845	0.01019	0.00174	20.56%
	PAHs	0	0	0	NA

\*This value is calculated by subtracting the average of 2.06 and 2.20 from 2.09.

## 5 Version Control

This section will be completed after management approval and after the CEIDARS FRACTION table and ORGPROFILE table are updated. Version information from CEIDARS FRACTION table will be copied here.

### References:

1. Davis, M. S. 2005 Architectural Coatings Survey; California Air Resources Board: Sacramento, CA, December, 2007.

## Appendix 1. Categories OG Profile 3901 Applies

In the current cross-reference table and for the following categories, OG Profile 1901 is assigned for years 1975 - 1999, and 2004 and after; OG Profile 2901 is assigned for years 2000 - 2003. The newly developed Profile 3901 will be assigned to these categories for 2004 and after.

**Table A1-a.**

SCC/EIC	Names Of Category			
46763	Solvent Use	Architectural	Oil-Based Coating	Unspecified
85399	Solvent Use	Architectural	Oil-Based Coating	Primer/Sealer/Under
85407	Solvent Use	Architectural	Oil-Based Coating	Quick Dry Prime/Seal
85415	Solvent Use	Architectural	Oil-Based Coating	Sealers
85423	Solvent Use	Architectural	Oil-Based Coating	Sanding Sealers
85431	Solvent Use	Architectural	Oil-Based Coating	Wtrproof Seal/Clear
85449	Solvent Use	Architectural	Oil-Based Coating	Wtrproof Seal/Opaque
85456	Solvent Use	Architectural	Oil-Based Coating	Stains - Clear
85464	Solvent Use	Architectural	Oil-Based Coating	Stains - Semitrans
85472	Solvent Use	Architectural	Oil-Based Coating	Stains - Opaque
85480	Solvent Use	Architectural	Oil-Based Coating	Varnish - Clear
85498	Solvent Use	Architectural	Oil-Based Coating	Varnish - Semitrans
85506	Solvent Use	Architectural	Oil-Based Coating	Quick Dry Enamel
85514	Solvent Use	Architectural	Oil-Based Coating	Lacquer - Clear
85522	Solvent Use	Architectural	Oil-Based Coating	Lacquer - Opaque
85530	Solvent Use	Architectural	Oil-Based Coating	Flat Coatings
85548	Solvent Use	Architectural	Oil-Based Coating	Hi Gloss Nonflat
85555	Solvent Use	Architectural	Oil-Based Coating	Med Gloss Nonflat
85563	Solvent Use	Architectural	Oil-Based Coating	Low Gloss Nonflat
85571	Solvent Use	Architectural	Oil-Based Coating	Bituminous Coatings
85589	Solvent Use	Architectural	Oil-Based Coating	Concrete Curing
85597	Solvent Use	Architectural	Oil-Based Coating	Dry Fog Coatings
85605	Solvent Use	Architectural	Oil-Based Coating	Ex Hi Durability
85613	Solvent Use	Architectural	Oil-Based Coating	Opaque Fire Retard
85621	Solvent Use	Architectural	Oil-Based Coating	Floor Coatings
85639	Solvent Use	Architectural	Oil-Based Coating	Form Release Coating
85647	Solvent Use	Architectural	Oil-Based Coating	High Temp Coatings
85654	Solvent Use	Architectural	Oil-Based Coating	Industrial Maint.
85662	Solvent Use	Architectural	Oil-Based Coating	Metal Pigment Coat
85670	Solvent Use	Architectural	Oil-Based Coating	Roof Coatings
85688	Solvent Use	Architectural	Oil-Based Coating	Swim Pool Repair
85696	Solvent Use	Architectural	Oil-Based Coating	Traffic Coatings
85704	Solvent Use	Architectural	Oil-Based Coating	Wood Preserv-Clear
85712	Solvent Use	Architectural	Oil-Based Coating	Wood Presv-Semitrans
52052091000000	Solvent Use	Architectural	Oil-Based Coating	Unspecified
52052091050000	Solvent Use	Architectural	Oil-Based Coating	Primer/Sealer/Under
52052091060000	Solvent Use	Architectural	Oil-Based Coating	Quick Dry Prime/Seal
52052091100000	Solvent Use	Architectural	Oil-Based Coating	Sealers
52052091120000	Solvent Use	Architectural	Oil-Based Coating	Sanding Sealers
52052091140000	Solvent Use	Architectural	Oil-Based Coating	Wtrproof Seal/Clear
52052091160000	Solvent Use	Architectural	Oil-Based Coating	Wtrproof Seal/Opaque
52052091320000	Solvent Use	Architectural	Oil-Based Coating	Stains - Clear
52052091340000	Solvent Use	Architectural	Oil-Based Coating	Stains - Semitrans
52052091360000	Solvent Use	Architectural	Oil-Based Coating	Stains - Opaque
52052091420000	Solvent Use	Architectural	Oil-Based Coating	Varnish - Clear
52052091440000	Solvent Use	Architectural	Oil-Based Coating	Varnish - Semitrans
52052091530000	Solvent Use	Architectural	Oil-Based Coating	Quick Dry Enamel

SCC/EIC	Names Of Category			
52052091550000	Solvent Use	Architectural	Oil-Based Coating	Lacquer - Clear
52052091560000	Solvent Use	Architectural	Oil-Based Coating	Lacquer - Opaque
52052091590000	Solvent Use	Architectural	Oil-Based Coating	Flat Coatings
52052091610000	Solvent Use	Architectural	Oil-Based Coating	Hi Gloss Nonflat
52052091620000	Solvent Use	Architectural	Oil-Based Coating	Med Gloss Nonflat
52052091630000	Solvent Use	Architectural	Oil-Based Coating	Low Gloss Nonflat
52052091640000	Solvent Use	Architectural	Oil-Based Coating	Bituminous Coatings
52052091650000	Solvent Use	Architectural	Oil-Based Coating	Concrete Curing
52052091660000	Solvent Use	Architectural	Oil-Based Coating	Dry Fog Coatings
52052091670000	Solvent Use	Architectural	Oil-Based Coating	Ex Hi Durability
52052091680000	Solvent Use	Architectural	Oil-Based Coating	Opaque Fire Retard
52052091690000	Solvent Use	Architectural	Oil-Based Coating	Floor Coatings
52052091700000	Solvent Use	Architectural	Oil-Based Coating	Form Release Coating
52052091710000	Solvent Use	Architectural	Oil-Based Coating	High Temp Coatings
52052091720000	Solvent Use	Architectural	Oil-Based Coating	Industrial Maint.
52052091730000	Solvent Use	Architectural	Oil-Based Coating	Metal Pigment Coat
52052091740000	Solvent Use	Architectural	Oil-Based Coating	Roof Coatings
52052091750000	Solvent Use	Architectural	Oil-Based Coating	Swim Pool Repair
52052091760000	Solvent Use	Architectural	Oil-Based Coating	Traffic Coatings
52052091780000	Solvent Use	Architectural	Oil-Based Coating	Wood Preserv-Clear
52052091790000	Solvent Use	Architectural	Oil-Based Coating	Wood Presv-Semitrans

In the current cross-reference table, OG Profile 1901 is assigned for years 1975 - 1999, and OG Profile 2901 is assigned for years 2000 and after for the following categories. The newly developed Profile 3901 will be assigned to these categories for 2004 and after.

**Table A1-b.**

SCC/EIC	Names of Category			
52052091080000	Solvent Use	Architectural	Oil-Based Coating	Specialty Primer, Sealer, And Undercoater
52052091090000	Solvent Use	Architectural	Oil-Based Coating	Bituminous Roof Primer
52052091130000	Solvent Use	Architectural	Oil-Based Coating	Waterproofing Sealers
52052091180000	Solvent Use	Architectural	Oil-Based Coating	Waterproofing Concrete/Masonry Sealers
52052091220000	Solvent Use	Architectural	Oil-Based Coating	Faux Finishing
52052091240000	Solvent Use	Architectural	Oil-Based Coating	Mastic Texture
52052091260000	Solvent Use	Architectural	Oil-Based Coating	Rust Preventative
52052091310000	Solvent Use	Architectural	Oil-Based Coating	Stains - Clear/Semitransparent
52052091410000	Solvent Use	Architectural	Oil-Based Coating	Varnish - Clear/Semitransparent
52052091570000	Solvent Use	Architectural	Oil-Based Coating	Lacquers (Unspecified)
52052091600000	Solvent Use	Architectural	Oil-Based Coating	Nonflat - Low Gloss/Medium Gloss
52052091770000	Solvent Use	Architectural	Oil-Based Coating	Wood Preservatives

## Appendix 2. Categories OG Profile 3902 Applies

In the current cross-reference table and for the following categories, OG Profile 1902 is assigned for years 1975 - 1999, and 2004 and after; OG Profile 2902 is assigned for years 2000 - 2003. The newly developed Profile 3902 will be assigned to these categories for 2004 and after.

**Table A2-a.**

SCC/EIC	Names of Category			
46755	Solvent Use	Architectural	Water-Based Coating	
85720	Solvent Use	Architectural	Water-Based Coating	Primer/Sealer/Under
85738	Solvent Use	Architectural	Water-Based Coating	Quick Dry Prime/Seal
85746	Solvent Use	Architectural	Water-Based Coating	Sealers
85753	Solvent Use	Architectural	Water-Based Coating	Sanding Sealers
85761	Solvent Use	Architectural	Water-Based Coating	Wtrproof Seal/Clear
85779	Solvent Use	Architectural	Water-Based Coating	Wtrproof Seal/Opaque
85787	Solvent Use	Architectural	Water-Based Coating	Stains - Clear
85795	Solvent Use	Architectural	Water-Based Coating	Stains - Semitrans
85803	Solvent Use	Architectural	Water-Based Coating	Stains - Opaque
85811	Solvent Use	Architectural	Water-Based Coating	Varnish - Clear
85829	Solvent Use	Architectural	Water-Based Coating	Varnish - Semitrans
85837	Solvent Use	Architectural	Water-Based Coating	Lacquer - Clear
85845	Solvent Use	Architectural	Water-Based Coating	Lacquer - Opaque
85852	Solvent Use	Architectural	Water-Based Coating	Flat Coatings
85860	Solvent Use	Architectural	Water-Based Coating	Hi Gloss Nonflat
85878	Solvent Use	Architectural	Water-Based Coating	Med Gloss Nonflat
85886	Solvent Use	Architectural	Water-Based Coating	Low Gloss Nonflat
85894	Solvent Use	Architectural	Water-Based Coating	Bituminous Coatings
85902	Solvent Use	Architectural	Water-Based Coating	Concrete Curing
85910	Solvent Use	Architectural	Water-Based Coating	Dry Fog Coatings
85928	Solvent Use	Architectural	Water-Based Coating	Opaque Fire Retard
85936	Solvent Use	Architectural	Water-Based Coating	Floor Coatings
85944	Solvent Use	Architectural	Water-Based Coating	Industrial Maint.
85951	Solvent Use	Architectural	Water-Based Coating	Metal Pigment Coat
85969	Solvent Use	Architectural	Water-Based Coating	Roof Coatings
85977	Solvent Use	Architectural	Water-Based Coating	Traffic Coatings
85985	Solvent Use	Architectural	Water-Based Coating	Wood Preserv-Clear
85993	Solvent Use	Architectural	Water-Based Coating	Wood Presv-Semitrans
52052092000000	Solvent Use	Architectural	Water-Based Coating	Unspecified
52052092050000	Solvent Use	Architectural	Water-Based Coating	Primer/Sealer/Under
52052092060000	Solvent Use	Architectural	Water-Based Coating	Quick Dry Prime/Seal
52052092100000	Solvent Use	Architectural	Water-Based Coating	Sealers
52052092120000	Solvent Use	Architectural	Water-Based Coating	Sanding Sealers
52052092140000	Solvent Use	Architectural	Water-Based Coating	Wtrproof Seal/Clear
52052092160000	Solvent Use	Architectural	Water-Based Coating	Wtrproof Seal/Opaque
52052092320000	Solvent Use	Architectural	Water-Based Coating	Stains - Clear
52052092340000	Solvent Use	Architectural	Water-Based Coating	Stains - Semitrans
52052092360000	Solvent Use	Architectural	Water-Based Coating	Stains - Opaque
52052092420000	Solvent Use	Architectural	Water-Based Coating	Varnish - Clear
52052092440000	Solvent Use	Architectural	Water-Based Coating	Varnish - Semitrans
52052092550000	Solvent Use	Architectural	Water-Based Coating	Lacquer - Clear
52052092560000	Solvent Use	Architectural	Water-Based Coating	Lacquer - Opaque
52052092590000	Solvent Use	Architectural	Water-Based Coating	Flat Coatings
52052092610000	Solvent Use	Architectural	Water-Based Coating	Hi Gloss Nonflat

SCC/EIC	Names of Category			
52052092620000	Solvent Use	Architectural	Water-Based Coating	Med Gloss Nonflat
52052092630000	Solvent Use	Architectural	Water-Based Coating	Low Gloss Nonflat
52052092640000	Solvent Use	Architectural	Water-Based Coating	Bituminous Coatings
52052092650000	Solvent Use	Architectural	Water-Based Coating	Concrete Curing
52052092660000	Solvent Use	Architectural	Water-Based Coating	Dry Fog Coatings
52052092680000	Solvent Use	Architectural	Water-Based Coating	Opaque Fire Retard
52052092690000	Solvent Use	Architectural	Water-Based Coating	Floor Coatings
52052092720000	Solvent Use	Architectural	Water-Based Coating	Industrial Maint.
52052092730000	Solvent Use	Architectural	Water-Based Coating	Metal Pigment Coat
52052092740000	Solvent Use	Architectural	Water-Based Coating	Roof Coatings
52052092760000	Solvent Use	Architectural	Water-Based Coating	Traffic Coatings
52052092780000	Solvent Use	Architectural	Water-Based Coating	Wood Preserv-Clear
52052092790000	Solvent Use	Architectural	Water-Based Coating	Wood Presv-Semitrans

In the current cross-reference table, OG Profile 1902 is assigned for years 1975 to 1999, and OG Profile 2902 is assigned for years 2000 and after for the following categories. The newly developed Profile 3902 will be assigned to these categories for 2004 and after.

**Table A2-b.**

SCC/EIC	Names of Category			
52052092080000	Solvent Use	Architectural	Water-Based Coating	Specialty Primer, Sealer, And Undercoater
52052092090000	Solvent Use	Architectural	Water-Based Coating	Bituminous Roof Primer
52052092130000	Solvent Use	Architectural	Water-Based Coating	Waterproofing Sealers
52052092180000	Solvent Use	Architectural	Water-Based Coating	Waterproofing Concrete/Masonry Sealers
52052092220000	Solvent Use	Architectural	Water-Based Coating	Faux Finishing
52052092230000	Solvent Use	Architectural	Water-Based Coating	Form Release Compounds
52052092240000	Solvent Use	Architectural	Water-Based Coating	Mastic Texture
52052092260000	Solvent Use	Architectural	Water-Based Coating	Rust Preventative
52052092310000	Solvent Use	Architectural	Water-Based Coating	Stains - Clear/Semitransparent
52052092410000	Solvent Use	Architectural	Water-Based Coating	Varnishes - Clear/Semitransparent
52052092570000	Solvent Use	Architectural	Water-Based Coating	Lacquers (Unspecified)
52052092600000	Solvent Use	Architectural	Water-Based Coating	Nonflat - Low Gloss/Medium Gloss
52052092770000	Solvent Use	Architectural	Water-Based Coating	Wood Preservatives