Appendix D

Recurring Cost Estimates

Recurring Cost Estimates

For each category proposed for regulation staff evaluates formulations of complying and noncomplying products. These formulations are then used to develop example, nonconfidential formulas that are representative of products in the category. These representative complying and noncomplying formulas are used to estimate the cost of raw materials (*i.e.* recurring costs) to produce each formulation. They are used in our economic impacts analysis.

To assign costs, distributor-level ingredient prices from *ICIS Chemical Business* website (ICIS, 2008), and chemical materials distributors were used to calculate the baseline and compliant material costs for these formulations. Other than compounds that were to be quantified, the 2006 Survey and the 2008 Survey Update did not ask for specific ingredient details for exempt compounds, fragrance materials, some low vapor pressure VOCs, and inorganic compounds. Unspecified ingredients or ingredients for which prices were unknown were grouped into an "all others" classification and assigned a default low and high cost of $3.50 and $7.00 per pound, respectively (ARB, 1997b), low and high cost for fragrance materials were estimated at $5.00 and $10.00 per pound respectively. Inorganic compounds were assigned a low and high cost of $0.09 and $0.91 per pound, respectively, based on the costs found of the most common inorganic compounds found in the product categories.

The costs calculated here are then copied into Table VIII-1a in Chapter VIII, Economic Impacts, to determine total costs of the proposed amendments.

The following Tables contain 'generic' complying and noncomplying formulations for each category. In categories where VOC limits are based on product form (*i.e.* aerosol and nonaerosol) formulations are provided for each form.

Furniture Maintenance Product (aerosol)

Category:	Furniture Maintenance Product	
Subcategory	Aerosol	
Typical noncompliant:	17	%VOC by weight
Proposed Limit:	12	%VOC by weight
Average Unit Size:	17	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	77.80	0.00	75.80	0.00
HC Propellant	0.700	10.00	0.07	10.00	0.07
Oil/Wax/resin/siloxane	3.500	5.00	0.18	5.00	0.18
Hydrocarbon VOC	0.540	7.00	0.04	2.00	0.01
Fragrance	5.000	0.20	0.01	0.20	0.01
LVP Hydrocarbon	0.950		0.00	7.00	0.07
		Total Cost, $/pound:	0.29		0.33
		Total Cost, $/Unit:	0.31		0.35
			Cost increase to comply, $/unit:		0.04

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	77.80	0.00	75.80	0.00
HC Propellant	1.050	10.00	0.11	10.00	0.11
Oil/Wax/resin/siloxane	7.000	5.00	0.35	5.00	0.35
Hydrocarbon VOC	0.800	7.00	0.06	2.00	0.02
Fragrance	10.000	0.20	0.02	0.20	0.02
LVP Hydrocarbon	1.050	0.00	0.00	7.00	0.07
		Total Cost, $/pound:	0.53		0.57
		Total Cost, $/Unit:	0.57		0.60
			Cost increase to comply, $/unit:		0.04

General Purpose Cleaner (nonaerosol)

Category:	General Purpose Cleaner	
Subcategory	Nonaerosol	
Typical noncompliant:	3	%VOC by weight
Proposed Limit:	0.50	%VOC by weight
Average Unit Size:	33.00	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	90.00	0.00	94.00	0.00
LVP-Solvent	0.950	5.00	0.05	3.00	0.03
LVP-Glycol Ether	1.150	2.00	0.02	2.50	0.03
Alcohol	0.457	1.00	0.00	0.50	0.00
Monoethanolamine	0.820	2.00	0.02	0.00	0.00
		Total Cost, $/pound:	0.09		0.06
		Total Cost, $/Unit:	0.19		0.13
				Cost increase to comply, $/unit:	(0.07)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	90.00	0.00	94.00	0.00
LVP-Solvent	1.050	5.00	0.05	3.00	0.03
LVP-Glycol Ether	1.760	2.00	0.04	2.50	0.04
Alcohol	0.940	1.00	0.01	0.50	0.00
Monoethanolamine	1.120	2.00	0.02	0.00	0.00
		Total Cost, $/pound:	0.12		0.08
		Total Cost, $/Unit:	0.25		0.17
				Cost increase to comply, $/unit:	(0.08)

General Purpose Degreaser (nonaerosol)

Category:	General Purpose Degreaser	
Subcategory	Nonaerosol	
Typical noncompliant:	4	%VOC by weight
Proposed Limit:	0.50	%VOC by weight
Average Unit Size:	23.00	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
2-butoxyethanol	1.300	4.00	0.05	0.00	0.00
surfactant	3.500	3.00	0.11	0.00	0.00
hydrocarbon LVP	0.950	8.00	0.08	0.00	0.00
LVP glycol ether	1.150	0.00	0.00	12.50	0.14
water	0.002	85.00	0.00	82.00	0.00
D-limonene	1.200	0.00	0.00	0.50	0.01
inorganic	0.090	0.00	0.00	5.00	0.00
		Total Cost, $/pound:	0.23		0.16
		Total Cost, $/Unit:	0.34		0.22
				Cost increase to comply, $/unit:	(0.11)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
2-butoxyethanol	1.340	4.00	0.05	0.00	0.00
surfactant	7.000	3.00	0.21	0.00	0.00
hydrocarbon LVP	1.050	8.00	0.08	0.00	0.00
LVP glycol ether	1.760	0.00	0.00	12.50	0.22
water	0.002	85.00	0.00	82.00	0.00
D-limonene	1.300	0.00	0.00	0.50	0.01
inorganic	0.910	0.00	0.00	5.00	0.05
		Total Cost, $/pound:	0.35		0.27
		Total Cost, $/Unit:	0.50		0.39
				Cost increase to comply, $/unit:	(0.11)

Glass Cleaner (nonaerosol)

Category:	Glass Cleaner	
Subcategory	Nonaerosol	
Typical noncompliant:	4	%VOC by weight
Proposed Limit:	3	%VOC by weight
Average Unit Size:	33	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	95.95	0.00	96.95	0.00
VOC Alcohol	0.457	2.00	0.01	1.50	0.01
VOC Glycol Ether	1.150	2.00	0.02	1.50	0.02
LVP Surfactant	3.500	0.05	0.00	0.05	0.00
		Total Cost, $/pound:	0.04		0.03
		Total Cost, $/Unit:	0.07		0.06
				Cost increase to comply, $/unit:	(0.02)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	95.95	0.00	96.95	0.00
VOC Alcohol	0.940	2.00	0.02	1.50	0.01
VOC Glycol Ether	1.200	2.00	0.02	1.50	0.02
LVP Surfactant	7.000	0.05	0.00	0.05	0.00
		Total Cost, $/pound:	0.05		0.04
		Total Cost, $/Unit:	0.10		0.08
				Cost increase to comply, $/unit:	(0.02)

Spot Remover (Dry Clean Only) (aerosol)

Category:	Spot Remover (Dry Clean Only)	
Subcategory	Aerosol	
Typical noncompliant:	25	%VOC by weight
Proposed Limit:	15	%VOC by weight
Average Unit Size:	20	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Methylene Chloride	0.810	70.00	0.57	0.00	0.00
Hydrocarbon Propellant	0.700	25.00	0.18	10.00	0.07
Inorganics (silica)	0.090	5.00	0.00	5.00	0.00
VOC solvent	0.540			5.00	0.03
LVP solvent	0.950			24.40	0.23
Surfactant	3.500			0.30	0.01
LVP Glycol Ether	1.150			25.30	0.29
Water	0.002			30.00	0.00
	Total Cost, $/pound:		0.75		0.64
	Total Cost, $/Unit:		0.93		0.79
			Cost increase to comply, $/unit:		(0.14)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Methylene Chloride	1.110	70.00	0.78	0.00	0.00
Hydrocarbon Propellant	1.050	25.00	0.26	10.00	0.11
Inorganics (silica)	0.910	5.00	0.05	5.00	0.05
VOC solvent	0.800			5.00	0.04
LVP solvent	1.050			24.40	0.26
Surfactant	7.000			0.30	0.02
LVP Glycol Ether	1.760			25.30	0.45
Water	0.002			30.00	0.00
	Total Cost, $/pound:		1.09		0.91
	Total Cost, $/Unit:		1.36		1.14
			Cost increase to comply, $/unit:		(0.21)

Spot Remover (Dry Clean Only) (nonaerosol)

Category:	Spot Remover (Dry Clean Only)	
Subcategory	Nonaerosol	
Typical noncompliant:	100	%VOC by weight
Proposed Limit:	3	%VOC by weight
Average Unit Size:	20	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Trichloroethylene	1.150	100.00	1.15	0.00	0.00
D-Limonene	1.200			3.00	0.04
LVP Hydrocarbon	0.950			60.00	0.57
LVP Glycol Ether	1.150			35.00	0.40
Surfactant	3.500			2.00	0.07
		Total Cost, $/pound:	1.15		1.08
		Total Cost, $/Unit:	1.44		1.35
				Cost increase to comply, $/unit:	(0.09)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Trichloroethylene	1.450	100.00	1.45	0.00	0.00
D-Limonene	1.300			3.00	0.04
LVP Hydrocarbon	1.050			60.00	0.63
LVP Glycol Ether	1.760			35.00	0.62
Surfactant	7.000			2.00	0.14
		Total Cost, $/pound:	1.45		1.43
		Total Cost, $/Unit:	1.81		1.78
				Cost increase to comply, $/unit:	(0.03)

Special Purpose Lubricant (aerosol)

Category:	Special Purpose Lubricant	
Subcategory	Aerosol	
Typical noncompliant:	36	%VOC by weight
Proposed Limit:	25	%VOC by weight
Average Unit Size:	14	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon propellant	0.700	18.00	0.13	15.00	0.11
LVP Hydrocarbon	0.950	20.00	0.19	23.00	0.22
Hydrocarbon solvent	0.540	18.00	0.10	10.00	0.05
Petroleum Base Oil	0.404	44.00	0.18	52.00	0.21
Total Cost, $/pound:			0.59		0.59
Total Cost, $/Unit:			0.52		0.51
Cost increase to comply, $/unit:					(0.00)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon propellant	1.050	18.00	0.19	15.00	0.16
LVP Hydrocarbon	1.050	20.00	0.21	23.00	0.24
Hydrocarbon solvent	0.800	18.00	0.14	10.00	0.08
Petroleum Base Oil	0.632	44.00	0.28	52.00	0.33
Total Cost, $/pound:			0.82		0.81
Total Cost, $/Unit:			0.72		0.71
Cost increase to comply, $/unit:					(0.01)

Special Purpose Lubricant (nonaerosol)

Category:	Special Purpose Lubricant	
Subcategory	Nonaerosol	
Typical noncompliant:	4	%VOC by weight
Proposed Limit:	3	%VOC by weight
Average Unit Size:	16	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon Solvent	0.600	2.50	0.02	2.00	0.01
Glycol Ether VOC	1.150	1.00	0.01	0.80	0.01
Monoethanolamine	0.820	0.50	0.00	0.20	0.00
LVP Glycol Ether	1.150	1.00	0.01	5.00	0.06
LVP Hydrocarbon Solvent	0.950	38.00	0.36	36.00	0.34
Petroleum Base Oil	0.404	57.00	0.23	56.00	0.23
		Total Cost, $/pound:	0.63		0.65
		Total Cost, $/Unit:	0.63		0.65
			Cost increase to comply, $/unit:		0.02

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon Solvent	0.850	2.50	0.02	2.00	0.02
Glycol Ether VOC	1.200	1.00	0.01	0.80	0.01
Monoethanolamine	1.120	0.50	0.01	0.20	0.00
LVP Glycol Ether	1.760	1.00	0.02	5.00	0.09
LVP Hydrocarbon Solvent	1.050	38.00	0.40	36.00	0.38
Petroleum Base Oil	0.632	57.00	0.36	56.00	0.35
		Total Cost, $/pound:	0.82		0.85
		Total Cost, $/Unit:	0.82		0.85
			Cost increase to comply, $/unit:		0.03

Metal Polish or Cleanser (aerosol)

Category:	Metal Polish or Cleanser	
Subcategory	Aerosol	
Typical noncompliant:	30	%VOC by weight
Proposed Limit:	15	%VOC by weight
Average Unit Size:	18	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon solvent	0.540	15.00	0.08	5.00	0.03
Hydrocarbon propellant	0.700	15.00	0.11	10.00	0.07
LVP Hydrocarbon	0.950	70.00	0.67	20.00	0.19
Water	0.002	0.00	0.00	65.00	0.00
	Total Cost, $/pound:		0.85		0.29
	Total Cost, $/Unit:		0.96		0.32
	Cost increase to comply, $/unit:				(0.63)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon solvent	0.800	15.00	0.12	5.00	0.04
Hydrocarbon propellant	1.050	15.00	0.16	10.00	0.11
LVP Hydrocarbon	1.050	70.00	0.74	20.00	0.21
Water	0.002	0.00	0.00	65.00	0.00
	Total Cost, $/pound:		1.01		0.36
	Total Cost, $/Unit:		1.14		0.40
	Cost increase to comply, $/unit:				(0.74)

Metal Polish or Cleanser (nonaerosol)

Category:	Metal Polish or Cleanser	
Subcategory	Nonaerosol	
Typical noncompliant:	30	%VOC by weight
Proposed Limit:	3	%VOC by weight
Average Unit Size:	32	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon VOC	0.540	20.00	0.11	2.50	0.01
D-limonene	1.200	10.00	0.12	0.00	0.00
LVP – Hydrocarbon	0.950	32.00	0.30	19.50	0.19
Water	0.002	38.00	0.00	77.50	0.00
Alcohol	0.457			0.50	0.00
		Total Cost, $/pound:	0.53		0.20
		Total Cost, $/Unit:	1.07		0.41
				Cost increase to comply, $/unit:	(0.66)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon VOC	0.800	20.00	0.16	2.50	0.02
D-limonene	1.300	10.00	0.13	0.00	0.00
LVP – Hydrocarbon	1.050	32.00	0.34	19.50	0.20
Water	0.002	38.00	0.00	77.50	0.00
Alcohol	0.940	0.00	0.00	0.50	0.00
		Total Cost, $/pound:	0.63		0.23
		Total Cost, $/Unit:	1.25		0.46
				Cost increase to comply, $/unit:	(0.79)

Flying Bug Insecticide (aerosol)

Category:	Flying Bug Insecticide	
Subcategory	Aerosol	
Typical noncompliant:	25	%VOC by weight
Proposed Limit:	20	%VOC by weight
Average Unit Size:	15	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon propellant	0.700	25.00	0.18	20.00	0.14
Water	0.002	57.00	0.00	65.00	0.00
LVP solvent	0.950	9.00	0.09	8.00	0.08
Surfactant	3.500	2.00	0.07	1.00	0.04
LVP Glycol Ether	1.150	5.00	0.06	4.00	0.05
Fragrance	5.000	1.00	0.05	1.00	0.05
Actives	3.500	1.00	0.04	1.00	0.04
		Total Cost, $/pound:	0.47		0.38
		Total Cost, $/Unit:	0.44		0.36
				Cost increase to comply, $/unit:	(0.09)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Hydrocarbon propellant	1.050	25.00	0.26	20.00	0.21
Water	0.002	57.00	0.00	65.00	0.00
LVP solvent	1.050	9.00	0.09	8.00	0.08
Surfactant	7.000	2.00	0.14	1.00	0.07
LVP Glycol Ether	1.760	5.00	0.09	4.00	0.07
Fragrance	10.000	1.00	0.10	1.00	0.10
Actives	7.000	1.00	0.07	1.00	0.07
		Total Cost, $/pound:	0.76		0.61
		Total Cost, $/Unit:	0.71		0.57
				Cost increase to comply, $/unit:	(0.14)

Wasp or Hornet Insecticide (aerosol)

Category:	Wasp or Hornet Insecticide	
Subcategory	Aerosol	
Typical noncompliant:	40	%VOC by weight
Proposed Limit:	10	%VOC by weight
Average Unit Size:	14	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
LVP Hydrocarbon	0.950	56.00	0.53	86.00	0.82
VOC solvent	0.540	40.00	0.22	10.00	0.05
CO2	0.270	3.00	0.01	3.00	0.01
Actives	3.500	1.00	0.04	1.00	0.04
	Total Cost, $/pound:		0.79		0.91
	Total Cost, $/Unit:		0.69		0.80
	Cost increase to comply, $/unit:				0.11

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
LVP Hydrocarbon	1.050	56.00	0.59	86.00	0.90
VOC solvent	0.800	40.00	0.32	10.00	0.08
CO2	0.270	3.00	0.01	3.00	0.01
Actives	7.000	1.00	0.07	1.00	0.07
	Total Cost, $/pound:		0.99		1.06
	Total Cost, $/Unit:		0.86		0.93
	Cost increase to comply, $/unit:				0.07

Oven or Grill Cleaner (nonaerosol)

Category:	Oven or Grill Cleaner	
Subcategory	Nonaerosol	
Typical noncompliant:	40	%VOC by weight
Proposed Limit:	4	%VOC by weight
Average Unit Size:	144	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	65.00	0.00	71.00	0.00
Sodium Hydroxide	0.086	10.00	0.01		
Potassium Hydroxide	1.700	20.00	0.34		
Monoethanolamine	0.820	2.00	0.02	1.00	0.01
Butyl Cellosolve	1.300	3.00	0.04	3.00	0.04
Inorganics	0.090			10.00	0.01
LVP-Glycol Ether	1.150			15.00	0.17
		Total Cost, $/pound:	0.41		0.23
		Total Cost, $/Unit:	3.65		2.07
				Cost increase to comply, $/unit:	(1.58)

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
Water	0.002	65.00	0.00	71.00	0.00
Sodium Hydroxide	0.091	10.00	0.01		
Potassium Hydroxide	2.000	20.00	0.40		
Monoethanolamine	1.120	2.00	0.02	1.00	0.01
Butyl Cellosolve	1.340	3.00	0.04	3.00	0.04
Inorganics	0.910			10.00	0.09
LVP-Glycol Ether	1.760			15.00	0.26
		Total Cost, $/pound:	0.47		0.41
		Total Cost, $/Unit:	4.26		3.67
				Cost increase to comply, $/unit:	(0.59)

Heavy-Duty Hand Cleaner or Soap

Category:	Heavy-Duty Hand Cleaner or Soap	
Subcategory	Nonaerosol	
Typical noncompliant:	8	%VOC by weight
Proposed Limit:	1	%VOC by weight
Average Unit Size:	133.5	wt. oz.

LOW COST

Formulation and Cost Comparison

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
LVP Solvent	0.950	13.00	0.12	19.00	0.18
Mineral Spirits	0.600	2.00	0.01	0.50	0.00
Fragrance	5.000	1.00	0.05	1.00	0.05
Water	0.002	59.00	0.00	56.00	0.00
Inorganic abrasive	0.090	8.00	0.01	10.00	0.01
D-Limonene	1.200	6.00	0.07	0.50	0.01
Surfactant	3.500	8.00	0.28	9.00	0.32
Propylene Glycol	0.840	3.00	0.03	4.00	0.03
		Total Cost, $/pound:	0.57		0.60
		Total Cost, $/Unit:	4.76		4.99
			Cost increase to comply, $/unit:		0.23

HIGH COST

Component (A)	Unit Cost $/lb (B)	Typical Noncompliant		VOC Compliant	
		Wt. % (C)	Cost (B)x(C)/100	Wt. % (D)	Cost (B)x(D)/100
LVP Solvent	1.050	13.00	0.14	19.00	0.20
Mineral Spirits	0.850	2.00	0.02	0.50	0.00
Fragrance	10.000	1.00	0.10	1.00	0.10
Water	0.002	59.00	0.00	56.00	0.00
Inorganic abrasive	0.910	8.00	0.07	10.00	0.09
D-Limonene	1.300	6.00	0.08	0.50	0.01
Surfactant	7.000	8.00	0.56	9.00	0.63
Propylene Glycol	0.960	3.00	0.03	4.00	0.04
		Total Cost, $/pound:	0.99		1.07
		Total Cost, $/Unit:	8.30		8.93
			Cost increase to comply, $/unit:		0.64