

Appendix 3-I (Risk Chapter)

Systemic Toxicity

Risk Concern Results

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Solvent-based Ink #S1 – Site 9B							
BLUE							
Alcohols		??	potential	??	potential	4.3x10 ⁵	low or negligible
Alkyl acetates	LM						
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Resins	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Alcohols		??	clear	??	clear	313	low or negligible
Pigments - organometallic	LM				no exposure		no exposure
Aromatic esters		??	low or negligible		no exposure		no exposure
Organotitanium compounds	M				no exposure		no exposure
Alkyl acetates		0.34 (HQ)	low or negligible	??	low or negligible	5.1x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Water							
Organic acids or salts	LM				no exposure		no exposure
Organic acids or salts		1.5 x10 ⁴	low or negligible		no exposure		no exposure
Alcohols		??	clear	??	clear	2.3x10 ⁴	low or negligible
GREEN							
Alcohols		??	potential	??	low or negligible	5.0x10 ⁵	low or negligible
Alcohols		??	clear	??	clear	7301	low or negligible
Alkyl acetates	LM						
Polyol derivatives	LM				no exposure		no exposure
Pigments - organic	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alkyl acetates		??	clear	??	clear	1.4x10 ⁵	low or negligible
Alcohols		??	potential	??	clear	4371	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Propylene glycol ethers		2.16 (HQ)	potential	3.7 (HQ)	potential	7.5x10 ⁻⁵ (HQ)	low or negligible
Resins	L				no exposure		no exposure
Resins	L				no exposure		no exposure
Inorganics		5.3 x10 ⁴	low or negligible		no exposure		no exposure
Water							
WHITE							
Pigments - inorganic		3.23 (HQ)	potential		no exposure ^e		no exposure
Alcohols		??	potential	??	potential	7.8x10 ⁴	low or negligible
Hydrocarbons - low molecular weight	LM						
Resins	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Alkyl acetates	LM						
Alkyl acetates		1.00 (HQ)	potential	??	clear	2.2x10 ⁵	low or negligible
Alcohols		??	potential	0.024	clear	117	low or negligible
Hydrocarbons - high molecular weight	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Organotitanium compounds	M				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Water							
Alcohols		??	clear	??	clear	4.5x10 ⁴	low or negligible
CYAN							
Alcohols		??	clear	??	clear	6226	low or negligible
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Resins	L				no exposure		no exposure
Alkyl acetates		??	clear	??	clear	7.3x10 ⁴	low or negligible
Propylene glycol ethers		3.23 (HQ)	potential	4.4 (HQ)	potential	9.1x10 ⁻⁵ (HQ)	low or negligible
Polyol derivatives	LM				no exposure		no exposure
Alcohols		??	potential	??	clear	904	low or negligible
Resins	L				no exposure		no exposure
Water							
Alkyl acetates	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
MAGENTA							
Alcohols		??	clear	??	clear	6790	low or negligible
Alcohols		??	low or negligible	??	low or negligible	1.1x10 ⁶	low or negligible
Pigments - organometallic	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Alkyl acetates	LM						
Propylene glycol ethers		2.47 (HQ)	potential	3.5 (HQ)	potential	7.2x10 ⁻⁵ (HQ)	low or negligible
Polyol derivatives	LM				no exposure		no exposure
Alkyl acetates		??	clear	??	clear	2.9x10 ⁵	low or negligible
Alcohols		??	potential	??	clear	697	low or negligible
Inorganics		124 (HQ)	clear		no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Water							
Trade Secret							
Propylene glycol ethers		28	potential	24.3	potential	1.2x10 ⁵	low or negligible
Solvent-based Ink #S2 – Site 5							
BLUE							
Alcohols		??	potential	??	potential	1.4x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	2.0x10 ⁵	low or negligible
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	3.3x10 ⁴	low or negligible
Alcohols		??	clear	0.028	clear	134	low or negligible
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
GREEN							
Alcohols		??	potential	??	potential	1.5x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	1.4x10 ⁵	low or negligible
Alkyl acetates	LM						
Pigments - inorganic		0.67 (HQ)	low or negligible		no exposure		no exposure
Alcohols		??	clear	??	clear	2.8x10 ⁴	low or negligible
Alcohols		??	clear	0.024	clear	118	low or negligible
Pigments - organic	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
WHITE							
Pigments - inorganic		3.37 (HQ)	potential		no exposure		no exposure
Resins	L				no exposure		no exposure
Alcohols		??	potential	??	potential	7.4x10 ⁴	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	4.1x10 ⁴	low or negligible
Alcohols		??	potential	0.017	clear	80	potential
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Siloxanes		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Alkyl acetates	LM						
CYAN							
Alcohols		??	potential	??	potential	1.1x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	1.6x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alcohols		??	clear	0.019	clear	90	potential
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	2.5x10 ⁴	low or negligible
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
MAGENTA							
Alcohols		??	potential	??	potential	1.6x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	8.9x10 ⁴	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Alcohols		??	clear	0.014	clear	65	potential
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	2.8x10 ⁴	low or negligible
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Polyol derivatives	LM				no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
Solvent-based Ink #S2 – Site 7							
BLUE							
Alcohols		??	potential	??	potential	3.4x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	2.6x10 ⁵	low or negligible
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	3938	low or negligible
Alcohols		??	clear	0.036	clear	174	low or negligible
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
GREEN							
Alcohols		??	potential	??	potential	3.5x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	2.4x10 ⁵	low or negligible
Alkyl acetates	LM						
Pigments - inorganic		0.41 (HQ)	low or negligible		no exposure		no exposure
Alcohols		??	clear	??	clear	3828	low or negligible
Alcohols		??	clear	0.043	clear	209	low or negligible
Pigments - organic	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Polyol derivatives	LM				no exposure		no exposure
Pigments - organometallic		1.1 x10 ⁴	low or negligible		no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
WHITE							
Pigments - inorganic		2.53 (HQ)	potential		no exposure		no exposure
Resins	L				no exposure		no exposure
Alcohols		??	low or negligible	??	potential	1.8x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	6.3x10 ⁴	low or negligible
Alcohols		??	potential	0.025	clear	123	low or negligible
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	2327	low or negligible
CYAN							
Alcohols		??	potential	??	potential	4.0x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	3.8x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alcohols		??	clear	0.046	clear	221	low or negligible
Alkyl acetates	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Alcohols		??	clear	??	clear	4825	low or negligible
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
MAGENTA							
Alcohols		??	potential	??	potential	3.3x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	1.4x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Alcohols		??	clear	0.022	clear	105	low or negligible
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	3716	low or negligible
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
Solvent-based Ink #S2 – Site 10							
BLUE							
Alcohols		??	low or negligible	??	potential	4.2x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	3.2x10 ⁵	low or negligible
Alkyl acetates	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Alcohols		??	clear	??	clear	3966	low or negligible
Alcohols		??	clear	0.044	clear	215	low or negligible
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
GREEN							
Alcohols		??	potential	??	potential	3.4x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	2.3x10 ⁵	low or negligible
Alkyl acetates	LM						
Pigments - inorganic		0.42 (HQ)	low or negligible		no exposure		no exposure
Alcohols		??	clear	??	clear	3634	low or negligible
Alcohols		??	clear	0.042	clear	205	low or negligible
Pigments - organic	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Pigments - organometallic		1.1 x10 ⁴	low or negligible		no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Amides or nitrogenous compounds	LM				no exposure		no exposure
Organophosphorus compounds		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
WHITE							
Pigments - inorganic		2.38 (HQ)	potential		no exposure		no exposure
Resins	L				no exposure		no exposure
Alcohols		??	low or negligible	??	potential	2.0x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	7.1x10 ⁴	low or negligible
Alcohols		??	potential	0.029	clear	140	low or negligible
Amides, tallow, hydrogenated	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	1964	low or negligible
CYAN							
Alcohols		??	low or negligible	??	potential	4.2x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	3.9x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alcohols		??	clear	0.047	clear	228	low or negligible
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	6933	low or negligible
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
Propylene glycol ethers		17 (HQ)	clear	53 (HQ)	clear		low or negligible
Propylene glycol ethers	LM						
MAGENTA							
Alcohols		??	low or negligible	??	potential	4.0x10 ⁵	low or negligible
Hydrocarbons - low molecular weight		??	low or negligible	??	clear	1.7x10 ⁵	low or negligible
Resins	L				no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Alcohols		??	clear	0.026	clear	127	low or negligible
Alkyl acetates	LM						
Alcohols		??	clear	??	clear	3028	low or negligible
Amides or nitrogenous compounds	L				no exposure		no exposure
Organic acids or salts		??	low or negligible		no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	LM				no exposure		no exposure
Polyol derivatives	LM				no exposure		no exposure
Hydrocarbons - low molecular weight	LM						
Organophosphorus compounds		??	potential		no exposure		no exposure
Propylene glycol ethers		3.36 (HQ)	potential	12 (HQ)	clear	2.4x10 ⁻⁴ (HQ)	low or negligible
Propylene glycol ethers	LM						
Water-based Ink #W1 – Site 4							
BLUE							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alcohols		??	clear	??	clear	1.8x10 ⁴	low or negligible
Water							
Pigments - organic	L				no exposure		no exposure
Ethylene glycol ethers		??	clear	??	clear	4586	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Resins	L				no exposure		no exposure
Hydrocarbons - high molecular weight		??	potential	??	potential	1.2x10 ⁶	low or negligible
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	43 (HQ)	clear	0.012 (HQ)	low or negligible
Alcohols		??	potential	??	clear	1395	low or negligible
GREEN							
Pigments - organometallic		??	potential		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organic	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	3.1x10 ⁴	low or negligible
Water							
Resins	L				no exposure		no exposure
Ethylene glycol ethers		??	clear	??	clear	7688	low or negligible
Hydrocarbons - high molecular weight		??	potential	??	potential	2.3x10 ⁶	low or negligible
Amides or nitrogenous compounds		??	clear	37 (HQ)	clear	0.010 (HQ)	low or negligible
Alcohols		??	potential	??	clear	2463	low or negligible
WHITE							
Pigments - inorganic		3.33 (HQ)	potential		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Water							
Resins	L				no exposure		no exposure
Alcohols		??	clear	??	clear	1.1x10 ⁴	low or negligible
Organic acids or salts	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	272 (HQ)	clear	0.075 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
CYAN							
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Water							
Ethylene glycol ethers		??	clear	??	clear	6520	low or negligible
Organic acids or salts	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Acrylic acid polymers	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	1.5x10 ⁵	low or negligible
Ethylene glycol ethers		??	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds		??	clear	11 (HQ)	clear	0.003 (HQ)	low or negligible
MAGENTA							
Pigments - organic		??	clear		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Water							
Ethylene glycol ethers		??	clear	??	clear	6333	low or negligible
Acrylic acid polymers	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	12 (HQ)	clear	0.003 (HQ)	low or negligible
Water-based Ink #W2 – Site 1							
BLUE							
Water							
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Resins		??	low or negligible		no exposure		no exposure
Resins	L				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Inorganics			low or negligible ^f		no exposure		no exposure
Ethylene glycol ethers	M				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	5.6 (HQ)	potential	0.002 (HQ)	low or negligible
Hydrocarbons - high molecular weight		1.6 x10 ⁴	low or negligible	1.1 x10 ⁴	low or negligible	6.3x10 ⁷	low or negligible
Hydrocarbons - low molecular weight		0.27 (HQ)	low or negligible	0.3 (HQ)	low or negligible	7.0x10 ⁻⁵ (HQ)	low or negligible
Hydrocarbons - high molecular weight		1.1 x10 ⁴	low or negligible	1.2 x10 ⁴	low or negligible	6.8x10 ⁷	low or negligible
Alcohols		0.13 (HQ)	low or negligible	??	clear	2020	low or negligible
Ethylene glycol ethers		??	potential	??	clear	5.4x10 ⁵	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Alcohols		??	clear	??	clear	4.2x10 ⁴	low or negligible
GREEN							
Water							
Resins		??	low or negligible		no exposure		no exposure
Pigments - organic	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Ethylene glycol ethers	M				no exposure		no exposure
Hydrocarbons - high molecular weight		??	low or negligible	??	low or negligible	4.9x10 ⁷	low or negligible
Amides or nitrogenous compounds		??	potential	10 (HQ)	clear	0.003 (HQ)	low or negligible
Hydrocarbons - low molecular weight		0.47 (HQ)	low or negligible	0.3 (HQ)	low or negligible	9.1x10 ⁻⁵ (HQ)	low or negligible
WHITE							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Ethylene glycol ethers		??	clear	??	clear	7599	low or negligible
Amides or nitrogenous compounds		??	clear	308 (HQ)	clear	0.084 (HQ)	low or negligible
Alcohols		2.01 (HQ)	potential	0.008	clear	29	potential
Hydrocarbons - high molecular weight		??	low or negligible	??	low or negligible	6.3x10 ⁶	low or negligible
Pigments - inorganic		2.93 (HQ)	potential		no exposure		no exposure
Alcohols		??	potential	??	clear	1.9x10 ⁵	low or negligible
CYAN							
Water							
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Resins	L				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Alcohols		1.58 (HQ)	potential	??	clear	781	low or negligible
Ethylene glycol ethers		11	clear	37.3	clear	2.1x10 ⁵	low or negligible
Amides or nitrogenous compounds		??	potential	6.4 (HQ)	potential	0.002 (HQ)	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
MAGENTA							
Water							
Resins		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Ethylene glycol ethers	M				no exposure		no exposure
Hydrocarbons - high molecular weight		??	low or negligible	2.8 x10 ⁴	low or negligible	1.6x10 ⁸	low or negligible
Amides or nitrogenous compounds		??	clear	8.2 (HQ)	potential	0.002 (HQ)	low or negligible
Hydrocarbons - low molecular weight		0.54 (HQ)	low or negligible	0.1 (HQ)	low or negligible	2.8x10 ⁻⁵ (HQ)	low or negligible
Pigments - organic	L				no exposure		no exposure
Alcohols		1.64 (HQ)	potential	??	clear	775	low or negligible
Ethylene glycol ethers		10	clear	37	clear	2.1x10 ⁵	low or negligible
Water-based Ink #W3 – Site 2							
BLUE							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	70 (HQ)	clear	0.019 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	9.3x10 ⁴	low or negligible
Amides or nitrogenous compounds		??	low or negligible	5.2 (HQ)	potential	0.001 (HQ)	low or negligible
Alcohols		1.4 x 10 ⁴	low or negligible	??	clear	2.8x10 ⁴	low or negligible
Polyfunctional aziridine					no exposure		no exposure
Other components							
GREEN							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	potential		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Amides or nitrogenous compounds		??	clear	93 (HQ)	clear	0.026 (HQ)	low or negligible
Pigments - organic	L				no exposure		no exposure
Alcohols		??	potential	??	clear	574	low or negligible
Olefin polymers	L				no exposure		no exposure
Ethylene glycol ethers		??	clear	??	clear	4.7x10 ⁴	low or negligible
Siloxanes		??	potential		no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	1.8x10 ⁵	low or negligible
Amides or nitrogenous compounds		??	low or negligible	2.8 (HQ)	potential	7.6x10 ⁻⁴ (HQ)	low or negligible
Alcohols						1.6x10 ⁴	low or negligible
WHITE							
Pigments - inorganic		2.55 (HQ)	potential		no exposure		no exposure
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	154 (HQ)	clear	0.042 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Alcohols		0.73 (HQ)	low or negligible	0.024	clear	86	potential
Organic acids or salts	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	4.6 x10 ⁴	low or negligible
Amides or nitrogenous compounds		??	low or negligible	5.7 (HQ)	potential	0.002 (HQ)	low or negligible
Alcohols		1.7 x10 ⁴	low or negligible	??	clear	1.4x10 ⁴	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
CYAN							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	54 (HQ)	clear	0.015 (HQ)	low or negligible
Olefin polymers	L				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Propylene glycol ethers		1.9 x10 ⁴	low or negligible	??	low or negligible	5.4x10 ⁶	low or negligible
Alcohols	LM				no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	6.6 (HQ)	potential	0.002 (HQ)	low or negligible
MAGENTA							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	clear		no exposure		no exposure
Amides or nitrogenous compounds		??	clear	58 (HQ)	clear	0.016 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Propylene glycol ethers		2.7 x10 ⁴	low or negligible	??	low or negligible	4.8x10 ⁶	low or negligible
Organic acids or salts	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	6.6 (HQ)	potential	0.002 (HQ)	low or negligible
Alcohols		??	low or negligible	??	low or negligible	4.9x10 ⁶	low or negligible
Alcohols		1.1 x10 ⁴	low or negligible	??	clear	3.2x10 ⁴	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Water-based Ink #W3 – Site 3							
BLUE							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	49 (HQ)	clear	0.014 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	5.4x10 ⁴	low or negligible
Amides or nitrogenous compounds		??	clear	42 (HQ)	clear	0.011 (HQ)	low or negligible
GREEN							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	potential		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	92 (HQ)	clear	0.025 (HQ)	low or negligible
Pigments - organic	LM				no exposure		no exposure
Alcohols		??	potential	??	clear	574	low or negligible
Olefin polymers	L				no exposure		no exposure
Ethylene glycol ethers		??	clear	??	clear	4.7x10 ⁴	low or negligible
Siloxanes		??	potential		no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	low or negligible	0.8 (HQ)	low or negligible	2.3x10 ⁻⁴ (HQ)	low or negligible
WHITE							
Pigments - inorganic		2.70 (HQ)	potential		no exposure		no exposure
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	217 (HQ)	clear	0.060 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Alcohols		0.77 (HQ)	low or negligible	0.017	clear	61	potential
Organic acids or salts	LM				no exposure		no exposure
Extender							no exposure
Alcohols		??	clear	??	clear	1.2x10 ⁴	low or negligible
Amides or nitrogenous compounds		??	potential	67 (HQ)	clear	0.018 (HQ)	low or negligible
CYAN							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	clear	26 (HQ)	clear	0.007 (HQ)	low or negligible
Olefin polymers	L				no exposure		no exposure
Ethylene glycol ethers	LM				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Propylene glycol ethers		1.8 x10 ⁴	low or negligible	??	low or negligible	1.1x10 ⁷	low or negligible
Alcohols	LM				no exposure		no exposure
Organic acids or salts	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	7.2 (HQ)	potential	0.002 (HQ)	low or negligible
MAGENTA							
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Pigments - organometallic		??	clear		no exposure		no exposure
Amides or nitrogenous compounds		??	clear	17 (HQ)	clear	0.005 (HQ)	low or negligible
Ethylene glycol ethers	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Siloxanes		??	potential		no exposure		no exposure
Propylene glycol ethers		2.0 x10 ⁴	low or negligible	??	low or negligible	1.7x10 ⁷	low or negligible
Organic acids or salts	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Ethylene glycol ethers		556	low or negligible	405	low or negligible	1.4x10 ⁶	low or negligible
Amides or nitrogenous compounds		??	potential	7.2 (HQ)	potential	0.002 (HQ)	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Water-based Ink #W4 – Site 9A							
BLUE							
Water							
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Pigments - organometallic	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	662	low or negligible
Propylene glycol ethers		2.54 (HQ)	potential	1.8 (HQ)	potential	5.0x10 ⁻⁵ (HQ)	low or negligible
Propylene glycol ethers		??	potential	??	potential	1.5x10 ⁵	low or negligible
Hydrocarbons - high molecular weight	LM						
Amides or nitrogenous compounds		??	low or negligible	??	clear	1.0x10 ⁵	low or negligible
Siloxanes	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Amides or nitrogenous compounds		3.0 x10 ⁴	low or negligible	5.2 x10 ⁴	low or negligible	2.9x10 ⁸	low or negligible
Alcohols		??	clear	??	clear	2.0x10 ⁵	low or negligible
Amides or nitrogenous compounds		??	potential	5.2 (HQ)	potential	0.001 (HQ)	low or negligible
GREEN							
Water							
Pigments - inorganic		2.55 (HQ)	potential	0 (HQ)	no exposure	0.0 (HQ)	no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	1.1x10 ⁵	low or negligible
Pigments - organic	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Alcohols		??	potential	??	clear	1410	low or negligible
Amides or nitrogenous compounds		??	low or negligible	1.4 x10 ⁴	low or negligible	7.7x10 ⁷	low or negligible
Amides or nitrogenous compounds		??	clear	4.3 (HQ)	potential	0.001 (HQ)	low or negligible
Hydrocarbons - high molecular weight	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Amides or nitrogenous compounds		??	low or negligible	??	clear	1.1x10 ⁵	low or negligible
Siloxanes	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	3.8 (HQ)	potential	0.001 (HQ)	low or negligible
WHITE							
Pigments - inorganic		4.52 (HQ)	potential		no exposure		no exposure
Water							
Acrylic acid polymers	LM				no exposure		no exposure
Inorganics			low or negligible ^f		no exposure		no exposure
Alcohols		??	potential	0.040	clear	143	low or negligible
Alcohols		??	clear	??	clear	3.6x10 ⁴	low or negligible
Amides or nitrogenous compounds		??	clear	42 (HQ)	clear	0.012 (HQ)	low or negligible
Hydrocarbons - high molecular weight	LM						
Amides or nitrogenous compounds		??	low or negligible	??	clear	1.1x10 ⁴	low or negligible
Siloxanes	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
CYAN							
Water							
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Resins	L				no exposure		no exposure
Alcohols		??	clear	??	clear	413	low or negligible
Propylene glycol ethers		3.36 (HQ)	potential	2.8 (HQ)	potential	7.6x10 ⁻⁵ (HQ)	low or negligible
Propylene glycol ethers		??	potential		no exposure		no exposure
Alcohols		1.1 x10 ⁴	low or negligible	??	low or negligible	1.2x10 ⁷	low or negligible
Hydrocarbons - high molecular weight	LM						
Amides or nitrogenous compounds		??	low or negligible	??	clear	6.4x10 ⁴	low or negligible
Siloxanes	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Amides or nitrogenous compounds		3.8 x10 ⁴	low or negligible	5.6 x10 ⁴	low or negligible	3.1x10 ⁸	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Solids					no exposure		no exposure
Ethylene glycol ethers							
Petroleum distillate	LM				no exposure		no exposure
Alcohols		??	clear	??	clear	1.7x10 ⁵	low or negligible
Amides or nitrogenous compounds		??	potential	6.1 (HQ)	potential	0.0 (HQ)	low or negligible
MAGENTA							
Water							
Pigments - organometallic		??	clear		no exposure		no exposure
Acrylic acid polymers	LM				no exposure		no exposure
Alcohols		??	potential	??	clear	991	low or negligible
Alcohols		??	clear	??	clear	1.7x10 ⁵	low or negligible
Amides or nitrogenous compounds		??	low or negligible	??	low or negligible	5.4x10 ⁷	low or negligible
Amides or nitrogenous compounds		??	low or negligible	??	clear	5.7x10 ⁴	low or negligible
Hydrocarbons - high molecular weight	LM						
Siloxanes	LM				no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Amides or nitrogenous compounds		??	potential	1.9 (HQ)	potential	5.2x10 ⁻⁴ (HQ)	low or negligible
UV-cured Ink #U1 – Site 11							
BLUE							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylated polymers					no exposure		no exposure
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
GREEN							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	potential		no exposure		no exposure
Acrylated polymers					no exposure		no exposure
Aromatic esters	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Acrylated polyols	M						
WHITE							
Acrylated polymers	LM				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Acrylated polymers					no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Aromatic esters	LM						
Organophosphorus compounds		??	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Pigments - inorganic		3.25 (HQ)	potential		no exposure		no exposure
Pigments - inorganic	LM				no exposure		no exposure
CYAN							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylated polymers					no exposure		no exposure
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
MAGENTA							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	clear		no exposure		no exposure
Acrylated polymers					no exposure		no exposure
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
UV-cured Ink #U2 – Site 6							
BLUE							
Acrylated polymers	LM				no exposure		no exposure
Acrylated polymers		??	clear		no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylated polyols		??	clear	??	clear	4299	low or negligible
Acrylated polyols	M						
Polyol derivatives	L				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylated polyols		??	clear		no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
Aromatic ketones		??	potential	??	potential	3.5x10 ⁵	low or negligible
Aromatic ketones		??	potential		no exposure		no exposure
Olefin polymers		1.1 x 10 ⁴	low or negligible		no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
GREEN							
Acrylated polymers	LM				no exposure		no exposure
Acrylated polyols		??	clear		no exposure		no exposure
Acrylated polyols		??	clear	??	clear	5153	low or negligible
Acrylated polymers		??	clear		no exposure		no exposure
Pigments - organometallic		??	potential		no exposure		no exposure
Polyol derivatives	L				no exposure		no exposure
Acrylated polyols	M						
Acrylated polymers	LM				no exposure		no exposure
Pigments - organic	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
Aromatic ketones		??	potential	??	low or negligible	6.7x10 ⁵	low or negligible
Aromatic ketones		??	potential		no exposure		no exposure
Olefin polymers		1.1 x 10 ⁴	low or negligible		no exposure		no exposure

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Alcohols	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
WHITE							
Pigments - inorganic		3.72 (HQ)	potential		no exposure		no exposure
Acrylated polyols		??	clear		no exposure		no exposure
Acrylated polyols		??	clear	??	clear	578	potential
Acrylated polyols	M						
Acrylated polymers	LM				no exposure		no exposure
Organophosphorus compounds		??	clear		no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
Aromatic ketones		??	potential		no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Olefin polymers		1.1 x10 ⁴	low or negligible		no exposure		no exposure
Aromatic ketones		??	potential	??	potential	1.0x10 ⁵	low or negligible
Aromatic ketones	L				no exposure		no exposure
CYAN							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylated polyols	M						
Acrylated polymers		??	clear		no exposure		no exposure
Acrylated polyols		??	clear	??	clear	1.4x10 ⁴	low or negligible
Polyol derivatives	L				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
Aromatic ketones		??	potential	??	low or negligible	8.6x10 ⁵	low or negligible
Aromatic ketones		??	potential		no exposure		no exposure
Olefin polymers		1.1 x10 ⁴	low or negligible		no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
Acrylated polyols		??	clear		no exposure		no exposure
MAGENTA							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	clear		no exposure		no exposure
Acrylated polymers		??	clear		no exposure		no exposure
Acrylated polyols		??	clear	??	clear	8232	low or negligible

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Acrylated polyols		??	clear		no exposure		no exposure
Polyol derivatives	L				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Acrylated polyols	M						
Aromatic ketones	L				no exposure		no exposure
Aromatic ketones		??	potential	??	low or negligible	5.5x10 ⁵	low or negligible
Aromatic ketones		??	potential		no exposure		no exposure
Olefin polymers		1.1 x10 ⁴	low or negligible		no exposure		no exposure
Alcohols	LM				no exposure		no exposure
Aromatic ketones	L				no exposure		no exposure
UV-cured Ink #U3 – Site 8							
BLUE							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylated polyols	M						
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
GREEN							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	potential		no exposure		no exposure
Acrylated polyols	M						
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
WHITE							
Pigments - inorganic		3.63 (HQ)	potential		no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Acrylated polymers	LM				no exposure		no exposure
Aromatic esters	LM						

Formulation	SAT hazard level ^d	Occupational				General population	
		Dermal		Inhalation		Inhalation	
		Margin of Exposure ^{a,b}	Concern level ^c	Margin of Exposure ^{a,b}	Concern level	Margin of Exposure ^{a,b}	Concern level
Organophosphorus compounds		??	potential		no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
CYAN							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organometallic		??	low or negligible		no exposure		no exposure
Acrylated polyols	M						
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure
MAGENTA							
Acrylated polymers	LM				no exposure		no exposure
Pigments - organic	L				no exposure		no exposure
Acrylated polyols	M						
Aromatic esters	LM						
Aromatic ketones		??	low or negligible		no exposure		no exposure
Aromatic ketones	LM				no exposure		no exposure
Amides or nitrogenous compounds	M						
Siloxanes	LM				no exposure		no exposure
Olefin polymers	L				no exposure		no exposure

^a A Margin-of-Exposure (MOE) or a Hazard Quotient (HQ) gives an estimate of the "margin of safety" between an estimated exposure level and the level at which adverse effects may occur. Hazard Quotient values below unity imply that adverse effects are very unlikely to occur. The more the Hazard Quotient exceeds unity, the greater the level of concern. High MOE values, such as values greater than 100 for a NOAEL-based MOE or 1000 for a LOAEL-based MOE, imply a low level of concern. As the MOE decreases, the level of concern increases.

^b The absence of HQ or MOE values in this table indicates that insufficient hazard data were available to calculate a HQ or MOE for that chemical.

^c The Concern Level is derived from a MOE or an HQ. The criteria in Table 3.15 on page 3-48 were used.

^d SAT Levels of Concern are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. L = low, LM = low to moderate, and M = moderate.

^e No level of concern could be assigned to this chemical due to no exposure.

^f A chronic/subchronic MOE was not available for this chemical due to a lack of hazard data for this route of exposure; however, the risk associated with dermal exposure to this chemical is expected to be very low.

Appendix 3-J (Risk Chapter)

Developmental Toxicity

Risk Concern Results

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Solvent-based Ink #S1 – Site 9B						
BLUE						
Alcohols	10.2	potential	467	low or negligible	2.3x10 ⁶	low or negligible
Alkyl acetates						
Pigments - organometallic				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Resins				no exposure		no exposure
Resins				no exposure		no exposure
Alcohols	??	clear	843	potential	4.1x10 ⁶	low or negligible
Pigments - organometallic		SAT		no exposure		no exposure
Aromatic esters	218	low or negligible		no exposure		no exposure
Organotitanium compounds		SAT		no exposure		no exposure
Alkyl acetates						
Resins				no exposure		no exposure
Water						
Organic acids or salts		SAT		no exposure		no exposure
Organic acids or salts	1.4x10 ⁵	low or negligible		no exposure		no exposure
Alcohols	268	low or negligible	244	low or negligible	1.2x10 ⁶	low or negligible
GREEN						
Alcohols	15.1	potential	550	low or negligible	2.7x10 ⁶	low or negligible
Alcohols	108	low or negligible	78.2	potential	3.8x10 ⁵	low or negligible
Alkyl acetates						
Polyol derivatives				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Alkyl acetates	??	low or negligible	973	potential	4.7x10 ⁶	low or negligible
Alcohols	??	clear	1177	low or negligible	5.7x10 ⁶	low or negligible
Propylene glycol ethers	1046	low or negligible	756	low or negligible	3.7x10 ⁶	low or negligible
Resins				no exposure		no exposure
Resins				no exposure		no exposure
Inorganics	5.3x10 ⁴	low or negligible		no exposure		no exposure
Water						
WHITE						
Pigments - inorganic				no exposure ^d		no exposure
Alcohols	14.6	potential	84.7	potential	4.1x10 ⁶	low or negligible

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Resins				no exposure		no exposure
Alkyl acetates						
Alkyl acetates						
Alcohols	??	clear	314	potential	1.5x10 ⁶	low or negligible
Hydrocarbons - high molecular weight				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Organotitanium compounds		SAT ^e		no exposure		no exposure
Organic acids or salts	6.7x10 ⁴	low or negligible		no exposure		no exposure
Water						
Alcohols	4231	low or negligible	489	low or negligible	2.4x10 ⁶	low or negligible
CYAN						
Alcohols	74.9	potential	67.2	potential	3.2x10 ⁵	low or negligible
Pigments - organometallic				no exposure		no exposure
Resins				no exposure		no exposure
Alkyl acetates	561	potential	504	potential	2.5x10 ⁶	low or negligible
Propylene glycol ethers	699	low or negligible	627	low or negligible	3.1x10 ⁶	low or negligible
Polyol derivatives				no exposure		no exposure
Alcohols	??	clear	2437	low or negligible	1.2x10 ⁷	low or negligible
Resins				no exposure		no exposure
Water						
Alkyl acetates						
MAGENTA						
Alcohols	84.8	potential	73.5	potential	3.5x10 ⁵	low or negligible
Alcohols	28.3	potential	1231	low or negligible	3.0x10 ⁶	low or negligible
Pigments - organometallic		SAT		no exposure		no exposure
Resins				no exposure		no exposure
Alkyl acetates						
Propylene glycol ethers	913	low or negligible	791	low or negligible	3.9x10 ⁶	low or negligible
Polyol derivatives				no exposure		no exposure
Alkyl acetates	??	low or negligible	2031	low or negligible	9.9x10 ⁶	low or negligible
Alcohols	??	clear	1878	low or negligible	9.1x10 ⁶	low or negligible
Inorganics	20.8	clear		no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Resins				no exposure		no exposure
Water						
Trade secret						
Propylene glycol ethers	703	low or negligible	607	low or negligible	3.0x10 ⁶	low or negligible

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Solvent-based Ink #S2 – Site 5						
BLUE						
Alcohols	8.22	clear	158	low or negligible	7.7x10 ⁵	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Alcohols	935	low or negligible	355	low or negligible	1.7x10 ⁶	low or negligible
Alcohols	??	clear	361	potential	1.7x10 ⁶	low or negligible
Pigments - organometallic				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.4x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	456	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	328	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
GREEN						
Alcohols	9.66	clear	165	low or negligible	8.0x10 ⁵	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Pigments - inorganic				no exposure		no exposure
Alcohols	907	low or negligible	307	low or negligible	1.5x10 ⁶	low or negligible
Alcohols	??	clear	319	potential	1.5x10 ⁶	low or negligible
Pigments - organic				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.2x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	406	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	292	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
WHITE						
Pigments - inorganic				no exposure		no exposure
Resins				no exposure		no exposure
Alcohols	12.9	potential	81.4	Potential	4.0x10 ⁵	low or negligible
Hydrocarbons - low molecular weight						
Alcohols	??	clear	215	potential	1.0x10 ⁶	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.2x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	405	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
CYAN						
Alcohols	9.0	clear	118	low or negligible	5.8x10 ⁵	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Alcohols	??	clear	243	potential	1.2x10 ⁶	low or negligible
Alkyl acetates						
Alcohols	1028	low or negligible	268	low or negligible	1.3x10 ⁶	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.3x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	418	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	301	potential		no exposure		no exposure
MAGENTA						
Alcohols	10.3	potential	174	low or negligible	8.5x10 ⁵	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Alcohols	0.003	clear	177	potential	8.5x10 ⁵	low or negligible
Alkyl acetates						
Alcohols	891	low or negligible	299	low or negligible	1.4x10 ⁶	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Organic acids or salts	1.2x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	398	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	287	potential		no exposure		no exposure
Solvent-based Ink #S2 – Site 7						
BLUE						
Alcohols	20.9	potential	372	low or negligible	1.8x10 ⁶	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Alcohols	120	low or negligible	42.4	potential	2.1x10 ⁵	low or negligible
Alcohols	??	clear	467	potential	2.3x10 ⁶	low or negligible
Pigments - organometallic				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.0x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	635	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	457	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
GREEN						
Alcohols	20.9	potential	379	low or negligible	1.8x10 ⁶	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Pigments - inorganic				no exposure		no exposure
Alcohols	114	low or negligible	41.2	potential	2.0x10 ⁵	low or negligible
Alcohols	??	clear	562	potential	2.7x10 ⁶	low or negligible
Pigments - organic				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.0x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	673	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	485	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
WHITE						
Pigments - inorganic				no exposure		no exposure
Resins				no exposure		no exposure
Alcohols	26.8	potential	196	low or negligible	9.6x10 ⁵	low or negligible
Hydrocarbons - low molecular weight						
Alcohols	??	clear	332	potential	1.6x10 ⁶	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.6x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	539	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Alcohols	173	low or negligible	25.1	potential	1.2x10 ⁵	low or negligible
CYAN						
Alcohols	20.4	potential	439	low or negligible	2.1x10 ⁶	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Alcohols	??	clear	593	potential	2.9x10 ⁶	low or negligible
Alkyl acetates						
Alcohols	122	low or negligible	51.8	potential	2.5x10 ⁵	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.9x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	623	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	449	potential		no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
MAGENTA						
Alcohols	21.3	potential	359	low or negligible	1.8x10 ⁶	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Alcohols	??	clear	283	potential	1.4x10 ⁶	low or negligible
Alkyl acetates						
Alcohols	119	low or negligible	40.0	potential	1.9x10 ⁵	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.9x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	639	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	460	potential		no exposure		no exposure
Solvent-based Ink #S2 – Site 10						
BLUE						
Alcohols	21.9	potential	??	clear	2.2x10 ⁶	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Alcohols	102	low or negligible	42.8	potential	2.1x10 ⁵	low or negligible
Alcohols	??	clear	577	potential	2.8x10 ⁶	low or negligible
Pigments - organometallic				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.0x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	664	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	478	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
GREEN						
Alcohols	20.1	potential	371	low or negligible	1.8x10 ⁶	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Pigments - inorganic				no exposure		no exposure
Alcohols	107	low or negligible	39.3	potential	1.9x10 ⁵	low or negligible
Alcohols	??	clear	551	potential	2.7x10 ⁶	low or negligible
Pigments - organic				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.0x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	647	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Organophosphorus compounds	466	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
WHITE						
Pigments - inorganic				no exposure		no exposure
Resins				no exposure		no exposure
Alcohols	28.4	potential	222	low or negligible	1.1x10 ⁶	low or negligible
Hydrocarbons - low molecular weight						
Alcohols	??	clear	376	potential	1.8x10 ⁶	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	1.7x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	573	potential		no exposure		no exposure
Hydrocarbons - low molecular weight						
Alkyl acetates						
Alcohols	137	low or negligible	21.2	potential	1.0x10 ⁵	low or negligible
CYAN						
Alcohols	22.9	potential	455	low or negligible	2.2x10 ⁶	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Alcohols	??	clear	614	potential	3.0x10 ⁶	low or negligible
Alkyl acetates						
Alcohols	189	low or negligible	74.8	potential	3.6x10 ⁵	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.1x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	697	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	502	potential		no exposure		no exposure
Propylene glycol ethers	133	low or negligible	52.7	potential	2.6x10 ⁵	low or negligible
Propylene glycol ethers		SAT		SAT		SAT
MAGENTA						
Alcohols	24.4	potential	435	low or negligible	2.1x10 ⁶	low or negligible
Hydrocarbons - low molecular weight						
Resins				no exposure		no exposure
Pigments - organometallic		SAT		no exposure		no exposure
Alcohols	??	clear	343	potential	1.7x10 ⁶	low or negligible
Alkyl acetates						
Alcohols	92.1	potential	32.6	potential	1.6x10 ⁵	low or negligible
Amides or nitrogenous compounds				no exposure		no exposure
Organic acids or salts	2.2x10 ⁴	low or negligible		no exposure		no exposure
Siloxanes	733	potential		no exposure		no exposure
Amides or nitrogenous compounds				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Hydrocarbons - low molecular weight						
Organophosphorus compounds	527	potential		no exposure		no exposure
Propylene glycol ethers	672	low or negligible	238	low or negligible	1.2x10 ⁶	low or negligible
Propylene glycol ethers		SAT		SAT		SAT
Water-based Ink #W1 – Site 4						
BLUE						
Acrylic acid polymers				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Alcohols	393	low or negligible	258	low or negligible	9.4x10 ⁵	low or negligible
Water						
Pigments - organic				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Ethylene glycol ethers	??	low or negligible	165	low or negligible	9.2x10 ⁵	low or negligible
Resins				no exposure		no exposure
Hydrocarbons - high molecular weight						
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Alcohols	??	clear	5000	low or negligible	1.8x10 ⁷	low or negligible
GREEN						
Pigments - inorganic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Alcohols	577	low or negligible	450	low or negligible	1.6x10 ⁶	low or negligible
Water						
Resins				no exposure		no exposure
Ethylene glycol ethers	1418	low or negligible	276	low or negligible	1.5x10 ⁶	low or negligible
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds						
Alcohols	??	clear	8813	low or negligible	3.2x10 ⁷	low or negligible
WHITE						
Pigments - inorganic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Water						
Resins				no exposure		no exposure
Alcohols	??	low or negligible	158	low or negligible	5.7x10 ⁵	low or negligible
Organic acids or salts	??	potential		no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
CYAN						
Pigments - organometallic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Water						
Ethylene glycol ethers	712	low or negligible	235	low or negligible	1.3x10 ⁶	low or negligible
Organic acids or salts	28.7	potential		no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Alcohols	1607	low or negligible	2114	low or negligible	7.7x10 ⁶	low or negligible
Ethylene glycol ethers				no exposure		no exposure
Amides or nitrogenous compounds						

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
MAGENTA						
Pigments - organic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Water						
Ethylene glycol ethers	704	low or negligible	227	low or negligible	1.3x10 ⁶	low or negligible
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Organic acids or salts	39.2	potential		no exposure		no exposure
Amides or nitrogenous compounds						
Water-based Ink #W2 – Site 1						
BLUE						
Water						
Pigments - organometallic				no exposure		no exposure
Resins	745	low or negligible		no exposure		no exposure
Resins				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Inorganics		low or negligible ^f		no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Amides or nitrogenous compounds						
Hydrocarbons - high molecular weight						
Hydrocarbons - low molecular weight	5576	low or negligible	832	potential	3.0x10 ⁶	low or negligible
Hydrocarbons - high molecular weight						
Alcohols	7.5x10 ⁴	low or negligible	5.5x10 ⁴	low or negligible	20.0x10 ⁸	low or negligible
Ethylene glycol ethers	1.6x10 ⁵	low or negligible	2.9x10 ⁴	low or negligible	1.61x10 ⁸	low or negligible
Alcohols	825	low or negligible	606	low or negligible	2.2x10 ⁶	low or negligible
GREEN						
Water						
Resins	418	low or negligible		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Resins				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Hydrocarbons - high molecular weight						

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Amides or nitrogenous compounds						
Hydrocarbons - low molecular weight	3168	low or negligible	647	potential	2.4x10 ⁶	low or negligible
WHITE						
Water						
Acrylic acid polymers				no exposure		no exposure
Ethylene glycol ethers	9950	low or negligible	410	low or negligible	2.3x10 ⁶	low or negligible
Amides or nitrogenous compounds						
Alcohols	??	low or negligible	781	low or negligible	2.9x10 ⁶	low or negligible
Hydrocarbons - high molecular weight						
Pigments - inorganic				no exposure		no exposure
Alcohols	1.6x10 ⁴	low or negligible	2731	low or negligible	10.0x10 ⁶	low or negligible
CYAN						
Water						
Pigments - organometallic				no exposure		no exposure
Resins				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Alcohols					7.8x10 ⁷	low or negligible
Ethylene glycol ethers	1.3x10 ⁴	low or negligible	1.1x10 ⁴	low or negligible	6.2x10 ⁷	low or negligible
Amides or nitrogenous compounds						
MAGENTA						
Water						
Resins	374	low or negligible		no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds						
Hydrocarbons - low molecular weight	2804	low or negligible	??	low or negligible	7.5x10 ⁶	low or negligible
Pigments - organic				no exposure		no exposure
Alcohols					7.8x10 ⁷	low or negligible
Ethylene glycol ethers	1.2x10 ⁴	low or negligible	1.1x10 ⁴	low or negligible	6.2x10 ⁷	low or negligible

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Water-based Ink #W3 – Site 2						
BLUE						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Siloxanes	725	potential		no exposure		no exposure
Olefin polymers				no exposure		no exposure
Organic acids or salts	1304	low or negligible		no exposure		no exposure
Alcohols	2976	low or negligible	1336	low or negligible	4.9x10 ⁶	low or negligible
Amides or nitrogenous compounds						
Alcohols	1.38	clear	1.0x10 ⁵	low or negligible	3.7x10 ⁸	low or negligible
Polyfunctional aziridine				no exposure		no exposure
Other components						
GREEN						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Pigments - organic				no exposure		no exposure
Alcohols	??	clear	ERR	low or negligible	7.5x10 ⁶	low or negligible
Olefin polymers				no exposure		no exposure
Ethylene glycol ethers	2.2x10 ⁵	low or negligible	??	low or negligible	1.4x10 ⁷	low or negligible
Siloxanes	862	potential		no exposure		no exposure
Organic acids or salts	774	low or negligible		no exposure		no exposure
Alcohols	5549	low or negligible	2530	low or negligible	9.2x10 ⁶	low or negligible
Amides or nitrogenous compounds						
Alcohols					2.1x10 ⁸	low or negligible
WHITE						
Pigments - inorganic				no exposure		no exposure
Water						
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Siloxanes	571	potential		no exposure		no exposure
Alcohols	1.3x10 ⁴	low or negligible	2358	low or negligible	8.6x10 ⁶	low or negligible
Organic acids or salts	686	low or negligible		no exposure		no exposure
Alcohols	3691	low or negligible	667	low or negligible	2.4x10 ⁶	low or negligible
Amides or nitrogenous compounds						
Alcohols	1.66	clear	4.9x10 ⁴	low or negligible	1.8x10 ⁸	low or negligible
CYAN						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Olefin polymers				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Siloxanes	??	potential		no exposure		no exposure
Propylene glycol ethers						
Alcohols				no exposure		no exposure
Organic acids or salts	613	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds						
MAGENTA						
Water						
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Pigments - organometallic	327	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Siloxanes	510	potential		no exposure		no exposure
Propylene glycol ethers						
Organic acids or salts	843	low or negligible		no exposure		no exposure
Alcohols				no exposure		no exposure
Amides or nitrogenous compounds						
Alcohols	1.0x10 ⁵	low or negligible	6.8x10 ⁴	low or negligible	2.5x10 ⁸	low or negligible
Alcohols	1.03	clear	1.1x10 ⁵	low or negligible	4.1x10 ⁸	low or negligible

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Water-based Ink #W3 – Site 3						
BLUE						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Siloxanes	532	potential		no exposure		no exposure
Olefin polymers				no exposure		no exposure
Organic acids or salts	957	low or negligible		no exposure		no exposure
Alcohols	907	low or negligible	782	low or negligible	2.8x10 ⁶	low or negligible
Amides or nitrogenous compounds						
GREEN						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Pigments - organic				no exposure		no exposure
Alcohols	??	clear	2063	low or negligible	7.5x10 ⁶	low or negligible
Olefin polymers						no exposure
Ethylene glycol ethers	1.5x10 ⁴	low or negligible	??	low or negligible	1.4x10 ⁸	low or negligible
Siloxanes	601	potential		no exposure		no exposure
Organic acids or salts	541	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds						
WHITE						
Pigments - inorganic				no exposure		no exposure
Water						
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Siloxanes	541	potential		no exposure		no exposure
Alcohols	1.2x10 ⁴	low or negligible	1656	low or negligible	6.1x10 ⁶	low or negligible
Organic acids or salts	649	low or negligible		no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Extender						
Alcohols	1314	low or negligible	176	low or negligible	6.4x10 ⁵	low or negligible
Amides or nitrogenous compounds						
CYAN						
Water						
Acrylic acid polymers				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Amides or nitrogenous compounds						
Olefin polymers				no exposure		no exposure
Ethylene glycol ethers				no exposure		no exposure
Siloxanes	388	potential		no exposure		no exposure
Propylene glycol ethers						
Alcohols				no exposure		no exposure
Organic acids or salts	583	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds						
MAGENTA						
Water						
Acrylic acid polymers				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Pigments - organometallic	240	low or negligible		no exposure		no exposure
Amides or nitrogenous compounds						
Ethylene glycol ethers				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Siloxanes	376	potential		no exposure		no exposure
Propylene glycol ethers						
Organic acids or salts	620	low or negligible		no exposure		no exposure
Alcohols				no exposure		no exposure
Ethylene glycol ethers	8000	low or negligible	809	low or negligible	3.0x10 ⁶	low or negligible
Amides or nitrogenous compounds						
Water-based Ink #W4 – Site 9A						
BLUE						
Water						
Pigments - organometallic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Resins				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Alcohols	??	clear	2369	low or negligible	8.6x10 ⁶	low or negligible
Propylene glycol ethers	888	low or negligible	1523	low or negligible	5.6x10 ⁶	low or negligible
Propylene glycol ethers	581	low or negligible	997	low or negligible	3.7x10 ⁶	low or negligible
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds	224	potential	386	potential	2.1x10 ⁶	low or negligible
Siloxanes				no exposure		no exposure
Alcohols				no exposure		no exposure
Amides or nitrogenous compounds	2.2x10 ⁵	low or negligible	3.9x10 ⁵	low or negligible	2.15x10 ⁹	low or negligible
Alcohols	1695	low or negligible	2916	low or negligible	1.1x10 ⁷	low or negligible
Amides or nitrogenous compounds						
GREEN						
Water						
Pigments - inorganic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Alcohols	865	low or negligible	1553	low or negligible	5.7x10 ⁶	low or negligible
Pigments - organic				no exposure		no exposure
Resins				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Alcohols	??	clear	5059	low or negligible	1.8x10 ⁷	low or negligible
Amides or nitrogenous compounds	5.7x10 ⁴	low or negligible	1.0x10 ⁵	low or negligible	5.71x10 ⁸	low or negligible
Amides or nitrogenous compounds						
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds	229	potential	412	potential	2.3x10 ⁶	low or negligible
Siloxanes				no exposure		no exposure
Alcohols				no exposure		no exposure
Amides or nitrogenous compounds						
WHITE						
Pigments - inorganic				no exposure		no exposure
Water						
Acrylic acid polymers				no exposure		no exposure
Inorganics		low or negligible ^f		no exposure		no exposure
Alcohols	??	clear	515	potential	1.9x10 ⁶	low or negligible
Alcohols	2363	low or negligible	515	low or negligible	1.9x10 ⁶	low or negligible

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Amides or nitrogenous compounds						
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds	192	potential	41.9	clear	2.3x10 ⁵	low or negligible
Siloxanes				no exposure		no exposure
Alcohols				no exposure		no exposure
CYAN						
Water						
Pigments - organometallic				no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Resins				no exposure		no exposure
Alcohols	??	clear	1475	low or negligible	5.4x10 ⁶	low or negligible
Propylene glycol ethers	672	low or negligible	1004	low or negligible	3.7x10 ⁶	low or negligible
Propylene glycol ethers	401	low or negligible		no exposure		no exposure
Alcohols	238	low or negligible	1.8x10 ⁴	low or negligible	6.5x10 ⁷	low or negligible
Hydrocarbons - high molecular weight						
Amides or nitrogenous compounds	164	potential	244	potential	1.4x10 ⁶	low or negligible
Siloxanes				no exposure		no exposure
Alcohols				no exposure		no exposure
Amides or nitrogenous compounds	2.8x10 ⁵	low or negligible	4.1x10 ⁵	low or negligible	2.30x10 ⁹	low or negligible
Solids				no exposure		no exposure
Ethylene glycol ethers	no exp		no exp		no exp	
Hydrocarbon - high molecular weight						
Alcohols	1661	low or negligible	2472	low or negligible	9.0x10 ⁶	low or negligible
Amides or nitrogenous compounds						
MAGENTA						
Water						
Pigments - organometallic	112	low or negligible		no exposure		no exposure
Acrylic acid polymers				no exposure		no exposure
Alcohols	??	clear	3554	low or negligible	1.3x10 ⁷	low or negligible
Alcohols	1112	low or negligible	2465	low or negligible	9.0x10 ⁶	low or negligible
Amides or nitrogenous compounds	3.3x10 ⁴	low or negligible	7.2x10 ⁴	low or negligible	40.0x10 ⁸	low or negligible
Amides or nitrogenous compounds	98.0	clear	217	potential	1.2x10 ⁶	low or negligible
Hydrocarbons - high molecular weight						

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Siloxanes				no exposure		no exposure
Alcohols				no exposure		no exposure
Amides or nitrogenous compounds						
UV-cured Ink #U1 – Site 11						
BLUE						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylated polymers	112	low or negligible		no exposure		no exposure
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
GREEN						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Acrylated polymers	114	low or negligible		no exposure		no exposure
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Acrylated polyols	630	potential	793	potential	1.99x10 ⁷	low or negligible
WHITE						
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polymers	187	low or negligible		no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Aromatic esters						
Organophosphorus compounds				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Pigments - inorganic		SAT		no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
CYAN						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylated polymers	112	low or negligible		no exposure		no exposure
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
MAGENTA						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organometallic	112	low or negligible		no exposure		no exposure
Acrylated polymers	112	low or negligible		no exposure		no exposure
Aromatic esters						
Aromatics ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
UV-cured Ink #U2 – Site 6						
BLUE						
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polymers				no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylated polyols						
Acrylated polyols	150	potential	188	potential	8.8x10 ⁵	low or negligible
Polyol derivatives				no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylated polyols	623	low or negligible		no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Aromatic ketones						
Aromatic ketones				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Alcohols				no exposure		no exposure
Aromatic ketones				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
GREEN						
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polyols	231	low or negligible		no exposure		no exposure
Acrylated polyols						
Acrylated polymers				no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Acrylated polyols	240	potential	572	potential	2.7x10 ⁶	low or negligible
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Aromatic ketones						
Aromatic ketones				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Alcohols				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
WHITE						
Pigments - inorganic				no exposure		no exposure
Acrylated polyols	145	low or negligible		no exposure		no exposure
Acrylated polyols						
Acrylated polyols	134	potential	44.4	clear	2.1x10 ⁵	low or negligible
Acrylated polymers		SAT		no exposure		no exposure
Organophosphorus compounds				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Alcohols				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Aromatic ketones						
Aromatic ketones				no exposure		no exposure
CYAN						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylated polyols	124	potential	373	potential	1.8x10 ⁶	low or negligible
Acrylated polymers				no exposure		no exposure
Acrylated polyols						
Polyol derivatives				no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Aromatic ketones						
Aromatic ketones				no exposure		no exposure
Olefin polymers				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
Alcohols				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Acrylated polyols	4545	low or negligible		no exposure		no exposure
MAGENTA						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organometallic	111	low or negligible		no exposure		no exposure
Acrylated polymers				no exposure		no exposure
Acrylated polyols						
Acrylated polyols	327	low or negligible		no exposure		no exposure
Polyol derivatives				no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polyols	168	potential	326	potential	1.5x10 ⁶	low or negligible
Aromatic ketones				no exposure		no exposure
Aromatic ketones						
Aromatic ketones				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Alcohols				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
UV-cured Ink #U3 – Site 8						
BLUE						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylated polyols		SAT		SAT		SAT
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
GREEN						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - inorganic				no exposure		no exposure
Acrylated polyols		SAT		SAT		SAT
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure

Formulation	Occupational				General Population	
	Dermal		Inhalation		Inhalation	
	MOE ^{a,b}	Concern Level ^c	MOE	Concern Level	MOE	Concern Level
WHITE						
Pigments - inorganic				no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Acrylated polymers		SAT		no exposure		no exposure
Aromatic esters						
Organophosphorus compounds				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
CYAN						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organometallic				no exposure		no exposure
Acrylated polyols		SAT		SAT		SAT
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure
MAGENTA						
Acrylated polymers		SAT		no exposure		no exposure
Pigments - organic				no exposure		no exposure
Acrylated polyols		SAT		SAT		SAT
Aromatic esters						
Aromatic ketones				no exposure		no exposure
Aromatic ketones				no exposure		no exposure
Amides or nitrogenous compounds		SAT		SAT		SAT
Siloxanes				no exposure		no exposure
Olefin polymers				no exposure		no exposure

^a A Margin of Exposure (MOE) or a Hazard Quotient (HQ) gives an estimate of the "margin of safety" between an estimated exposure level and the level at which adverse effects may occur. Hazard Quotient values below unity imply that adverse effects are very unlikely to occur. The more the Hazard Quotient exceeds unity, the greater the level of concern. High MOE values, such as values greater than 100 for a NOAEL-based MOE or 1000 for a LOAEL-based MOE, imply a low level of concern. As the MOE decreases, the level of concern increases.

^b The absence of HQ or MOE values in this table indicates that insufficient hazard data were available to calculate a HQ or MOE for that chemical.

^c The Concern Level is derived from a MOE or an HQ. Concern Levels for developmental toxicity were assessed by criteria presented in a memorandum from J. Seed to T. O'Bryan, "Criteria for 8(e) CAP Submissions", USEPA, OPPTS, March 25, 1994.

^d No level of concern could be assigned to this chemical due to no exposure.

^e The OPPT Structure Activity Team has indicated a concern for developmental toxicity for this chemical. SAT concerns are provided only for those chemicals with insufficient developmental hazard data available. It should be noted that SAT-based developmental toxicity concerns were not ranked as were systemic toxicity concerns; the SAT indicated only if a concern for developmental toxicity existed for a given chemical.

^f A developmental MOE was not available for this chemical due to a lack of hazard data for this route of exposure; however, the risk associated with dermal exposure to this chemical is expected to be very low.

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Appendix 3-K (Risk Chapter)
Summary of Occupational
Systemic Toxicity Risk Concern — Dermal^a

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
Solvent-based Ink #S1 - Site 9B								
BLUE (15) ^d	4	1	2	2	5	1	-	-
GREEN (12)	2	3	2	2	3	-	-	-
WHITE (13)	1	4	1	1	5	1	-	-
CYAN (9)	1	2	2	2	2	-	-	-
MAGENTA (14)	1	3	3	2	4	-	-	1
TOTALS (63)	9/63 (14%)	13/63 (21%)	10/63 (16%)	9/63 (14%)	19/63 (30%)	2/63 (3%)	-	1/63 (2%)
Solvent-based Ink #S2 - Site 5								
BLUE (15)	3	3	2	2	5	-	-	-
GREEN (17)	5	3	2	2	5	-	-	-
WHITE (10)	2	4	-	2	2	-	-	-
CYAN (14)	3	3	2	2	4	-	-	-
MAGENTA (14)	2	3	2	2	5	-	-	-
TOTALS (70)	15/70 (21%)	16/70 (23%)	8/70 (11%)	10/70 (14%)	21/70 (30%)	-	-	-
Solvent-based Ink #S2 - Site 7								
BLUE (15)	3	3	2	2	5	-	-	-
GREEN (17)	5	3	2	2	5	-	-	-
WHITE (11)	3	3	1	2	2	-	-	-
CYAN (14)	3	3	2	2	4	-	-	-
MAGENTA (14)	2	3	2	2	5	-	-	-
TOTALS (71)	16/71 (23%)	15/71 (21%)	9/71 (13%)	10/71 (14%)	21/71 (30%)	-	-	-
Solvent-based Ink #S2 - Site 10								
BLUE (15)	4	2	2	2	5	-	-	-
GREEN (17)	5	3	2	2	5	-	-	-
WHITE (11)	3	3	1	2	2	-	-	-
CYAN (16)	4	2	3	2	5	-	-	-
MAGENTA (16)	3	3	2	2	6	-	-	-
TOTALS (75)	19/75 (25%)	13/75 (17%)	10/75 (13%)	10/75 (13%)	23/75 (31%)	-	-	-

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low - moderate concern	moderate concern		
Water-based Ink #W1 - Site 4								
BLUE (10)	1	2	3	2	2	-	-	-
GREEN (10)	-	3	3	1	3	-	-	-
WHITE (7)	-	1	2	1	3	-	-	-
CYAN (9)	2	-	3	-	4	-	-	-
MAGENTA (7)	-	-	3	-	4	-	-	-
TOTALS (43)	3/43 (7%)	6/43 (14%)	14/43 (33%)	4/43 (9%)	16/43 (37%)	-	-	-
Water-based Ink #W2 - Site 1								
BLUE (16)	7	2	1	3	2	1	-	-
GREEN (9)	3	1	-	1	3	1	-	-
WHITE (7)	1	3	2	-	1	-	-	-
CYAN (6)	1	2	1	1	1	-	-	-
MAGENTA (10)	3	1	2	1	2	1	-	-
TOTALS (48)	15/48 (31%)	9/48 (19%)	6/48 (13%)	6/48 (13%)	9/48 (19%)	3/48 (6%)	-	-
Water-based Ink #W3 - Site 2								
BLUE (13)	2	1	2	1	5	-	-	2
GREEN (13)	1	3	3	1	4	-	-	1
WHITE (12)	3	2	2	-	5	-	-	-
CYAN (11)	2	2	1	-	6	-	-	-
MAGENTA (13)	3	2	2	-	6	-	-	-
TOTALS (62)	11/62 (18%)	10/62 (16%)	10/62 (16%)	2/62 (3%)	26/62 (42%)	-	-	3/62 (5%)
Water-based Ink #W3 - Site 3								
BLUE (10)	0	1	3	1	5	-	-	-
GREEN (11)	1	3	2	-	5	-	-	-
WHITE (12)	1	3	2	-	5	-	-	1
CYAN (11)	2	2	1	-	6	-	-	-
MAGENTA (12)	2	2	2	-	6	-	-	-
TOTALS (56)	6/56 (11%)	11/56 (20%)	10/56 (18%)	1/56 (2%)	27/56 (48%)	-	-	1/56 (2%)
Water-based Ink #W4 - Site 9A								
BLUE (14)	3	3	2	1	5	-	-	-
GREEN (15)	4	3	2	1	5	-	-	-
WHITE (10)	2	2	2	-	4	-	-	-
CYAN (17)	4	3	2	1	5	-	-	2
MAGENTA (10)	2	2	2	-	4	-	-	-
TOTALS (66)	15/66 (23%)	13/66 (20%)	10/66 (15%)	3/66 (5%)	23/66 (35%)	-	-	2/66 (3%)

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low - moderate concern	moderate concern		
UV-cured Ink #U1 - Site 11								
BLUE (9)	1	-	-	1	6	1	-	-
GREEN (10)	1	1	-	-	6	2	-	-
WHITE (11)	1	1	-	-	8	1	-	-
CYAN (9)	2	-	-	-	6	1	-	-
MAGENTA (9)	1	-	1	-	7	1	-	-
TOTALS (48)	6/48 (13%)	2/48 (4%)	1/48 (2%)	1/48 (2%)	32/48 (67%)	6/48 (13%)	-	-
UV-cured Ink #U2 - Site 6								
BLUE (15)	2	2	3	4	3	1	-	-
GREEN (15)	1	3	3	3	4	1	-	-
WHITE (12)	1	3	3	2	2	1	-	-
CYAN (14)	2	2	3	3	3	1	-	-
MAGENTA (14)	1	2	4	3	3	1	-	-
TOTALS (70)	7/70 (10%)	12/70 (17%)	16/70 (23%)	15/70 (21%)	15/70 (21%)	5/70 (7%)	-	-
UV-cured Ink #U3 - Site 8								
BLUE (9)	1	-	-	1	5	2	-	-
GREEN (9)	1	1	-	-	5	2	-	-
WHITE (10)	-	2	-	-	7	1	-	-
CYAN (9)	2	-	-	-	5	2	-	-
MAGENTA (9)	1	-	-	1	5	2	-	-
TOTALS (46)	5/46 (11%)	3/46 (7%)	-	2/46 (4%)	27/46 (59%)	9/46 (20%)	-	-

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available. Criteria for SAT concern levels are presented on page 3-49.

^d Number of chemicals in the color.

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Appendix 3-L (Risk Chapter)
Summary of Occupational
Systemic Toxicity Risk Concern — Inhalation^a

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
Solvent-based Ink #S1 - Site 9B								
BLUE (15) ^d	1	1	2	-	1	-	10	-
GREEN (12)	1	1	3	1	-	-	6	-
WHITE (13)	0	1	3	-	2	-	7	-
CYAN (9)	-	1	3	-	1	-	4	-
MAGENTA (14)	1	2	3	-	1	-	6	1
TOTALS (63)	3/63 (5%)	6/63 (10%)	14/63 (22%)	1/63 (2%)	5/63 (8%)	-	33/63 (52%)	1/63 (2%)
Solvent-based Ink #S2 - Site 5								
BLUE (15)	-	1	3	-	2	-	9	-
GREEN (17)	-	1	3	-	2	-	11	-
WHITE (10)	-	1	2	-	2	-	5	-
CYAN (14)	-	1	3	-	2	-	8	-
MAGENTA (14)	-	1	3	-	2	-	8	-
TOTALS (70)	-	5/70 (7%)	14/70 (20%)	-	10/70 (14%)	-	41/70 (59%)	-
Solvent-based Ink #S2 - Site 7								
BLUE (15)	-	1	3	-	2	-	9	-
GREEN (17)	-	1	3	-	2	-	11	-
WHITE (11)	-	1	3	-	2	-	5	-
CYAN (14)	-	1	3	-	2	-	8	-
MAGENTA (14)	-	1	3	-	2	-	8	-
TOTALS (71)	-	5/71 (7%)	15/71 (21%)	-	10/71 (14%)	-	41/71 (58%)	-
Solvent-based Ink #S2 - Site 10								
BLUE (15)	-	1	3	-	2	-	9	-
GREEN (17)	-	1	3	-	2	-	11	-
WHITE (11)	-	1	3	-	2	-	5	-
CYAN (16)	-	1	4	-	3	-	8	-
MAGENTA (16)	-	1	4	-	3	-	8	-
TOTALS (75)	-	5/75 (7%)	17/75 (23%)	-	12/75 (16%)	-	41/75 (55%)	-

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
Water-based Ink #W1 - Site 4								
BLUE (10)	-	1	4	-	-	-	5	-
GREEN (10)	-	1	4	-	-	-	5	-
WHITE (7)	-	-	2	-	-	-	5	-
CYAN (9)	-	-	3	-	-	-	6	-
MAGENTA (7)	-	-	2	-	-	-	5	-
TOTALS (43)	-	2/43 (5%)	15/43 (35%)	-	-	-	26/43 (60%)	-
Water-based Ink #W2 - Site 1								
BLUE (16)	3	1	3	-	-	-	9	-
GREEN (9)	2	-	1	-	-	-	6	-
WHITE (7)	1	-	4	-	-	-	2	-
CYAN (6)	-	1	2	-	-	-	3	-
MAGENTA (10)	2	1	2	-	-	-	5	-
TOTALS (48)	8/48 (17%)	3/48 (6%)	12/48 (25%)	-	-	-	25/48 (52%)	-
Water-based Ink #W3 - Site 2								
BLUE (13)	-	1	3	-	-	-	8	1
GREEN (13)	-	1	4	-	-	-	7	1
WHITE (12)	-	1	4	-	-	-	7	-
CYAN (11)	1	1	1	-	-	-	8	-
MAGENTA (13)	2	1	2	-	-	-	8	-
TOTALS (62)	3/62 (5%)	5/62 (8%)	14/62 (23%)	-	-	-	38/62 (61%)	2/62 (3%)
Water-based Ink #W3 - Site 3								
BLUE (10)	-	-	3	-	-	-	7	-
GREEN (11)	1	-	3	-	-	-	7	-
WHITE (12)	-	-	4	-	-	-	7	1
CYAN (11)	1	1	1	-	-	-	8	-
MAGENTA (12)	2	1	1	-	-	-	8	-
TOTALS (56)	4/56 (7%)	2/56 (4%)	12/56 (21%)	-	-	-	37/56 (66%)	1/56 (2%)
Water-based Ink #W4 - Site 9A								
BLUE (14)	1	3	3	-	1	-	6	-
GREEN (15)	1	2	3	-	1	-	8	-
WHITE (10)	-	-	4	-	1	-	5	-
CYAN (17)	2	2	3	-	1	-	8	1
MAGENTA (10)	1	1	3	-	1	-	4	-
TOTALS (66)	5/66 (8%)	8/66 (12%)	16/66 (24%)	-	5/66 (8%)	-	31/66 (47%)	1/66 (2%)

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
UV-cured Ink #U1 - Site 11								
BLUE (9)	-	-	-	-	1	1	7	-
GREEN (10)	-	-	-	-	1	2	7	-
WHITE (11)	-	-	-	-	1	1	9	-
CYAN (9)	-	-	-	-	1	1	7	-
MAGENTA (9)	-	-	-	-	1	1	7	-
TOTALS (48)	-	-	-	-	5/48 (10%)	6/48 (13%)	37/48 (77%)	-
UV-cured Ink #U2 - Site 6								
BLUE (15)	-	1	1	-	-	1	12	-
GREEN (15)	1	-	1	-	-	1	12	-
WHITE (12)	-	1	1	-	-	1	9	-
CYAN (14)	1	-	1	-	-	1	11	-
MAGENTA (14)	1	-	1	-	-	1	11	-
TOTALS (70)	3/70 (4%)	2/70 (3%)	5/70 (7%)	-	-	5/70 (7%)	55/70 (79%)	-
UV-cured Ink #U3 - Site 8								
BLUE (9)	-	-	-	-	1	2	6	-
GREEN (9)	-	-	-	-	1	2	6	-
WHITE (10)	-	-	-	-	1	1	8	-
CYAN (9)	-	-	-	-	1	2	6	-
MAGENTA (9)	-	-	-	-	1	2	6	-
TOTALS (46)	-	-	-	-	5/46 (11%)	9/46 (20%)	32/46 (70%)	-

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available. Criteria for SAT concern levels are presented on page 3-49.

^d Number of chemicals in the color.

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Appendix 3-M (Risk Chapter)
Summary of Occupational
Developmental Toxicity Risk Concern — Dermal^a

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
Solvent-based Ink #S1 - Site 9B						
BLUE (15) ^d	3	1	1	3	-	7
GREEN (12)	4	1	1	-	-	6
WHITE (13)	2	1	1	1	-	8
CYAN (9)	1	2	1	-	-	5
MAGENTA (14)	2	2	2	1	-	7
TOTALS (63)	12/63 (19%)	7/63 (11%)	6/63 (10%)	5/63 (8%)	-	33/63 (52%)
Solvent-based Ink #S2 - Site 5						
BLUE (15)	2	2	2	1	-	8
GREEN (17)	2	2	2	-	-	11
WHITE (10)	1	2	1	-	-	6
CYAN (14)	2	2	2	-	-	8
MAGENTA (14)	2	3	1	1	-	7
TOTALS (70)	9/70 (13%)	11/70 (16%)	8/70 (11%)	2/70 (3%)	-	40/70 (57%)
Solvent-based Ink #S2 - Site 7						
BLUE (15)	2	3	1	1	-	8
GREEN (17)	2	3	1	-	-	11
WHITE (11)	2	2	1	-	-	6
CYAN (14)	2	3	1	-	-	8
MAGENTA (14)	2	3	1	1	-	7
TOTALS (71)	10/71 (14%)	14/71 (20%)	5/71 (7%)	2/71 (3%)	-	40/71 (56%)
Solvent-based Ink #S2 - Site 10						
BLUE (15)	2	3	1	1	-	8
GREEN (17)	2	3	1	-	-	11
WHITE (11)	2	2	1	-	-	6
CYAN (16)	3	3	1	1	-	8
MAGENTA (16)	2	4	1	2	-	7
TOTALS (75)	11/75 (15%)	15/75 (20%)	5/75 (7%)	4/75 (5%)	-	40/75 (53%)

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
Water-based Ink #W1 - Site 4						
BLUE (10)	2	-	1	-	-	7
GREEN (10)	2	-	1	-	-	7
WHITE (7)	1	1	-	-	-	5
CYAN (9)	2	1	-	-	-	6
MAGENTA (7)	1	1	-	-	-	5
TOTALS (43)	8/43 (19%)	3/43 (7%)	2/43 (5%)	-	-	30/43 (70%)
Water-based Ink #W2 - Site 1						
BLUE (16)	6	-	-	-	-	10
GREEN (9)	2	-	-	-	-	7
WHITE (7)	3	-	-	-	-	4
CYAN (6)	1	-	-	-	-	5
MAGENTA (10)	3	-	-	-	-	7
TOTALS (48)	15/48 (31%)	-	-	-	-	33/48 (69%)
Water-based Ink #W3 - Site 2						
BLUE (13)	2	1	1	-	-	9
GREEN (13)	3	1	1	-	-	8
WHITE (12)	3	1	1	-	-	7
CYAN (11)	1	1	-	-	-	9
MAGENTA (13)	3	1	1	-	-	8
TOTALS (62)	12/62 (19%)	5/62 (8%)	4/62 (6%)	-	-	41/62 (66%)
Water-based Ink #W3 - Site 3						
BLUE (10)	2	1	-	-	-	7
GREEN (11)	2	1	1	-	-	7
WHITE (12)	3	1	-	-	-	8
CYAN (11)	1	1	-	-	-	9
MAGENTA (12)	3	1	-	-	-	8
TOTALS (56)	11/56 (20%)	5/56 (9%)	1/56 (2%)	-	-	39/56 (70%)
Water-based Ink #W4 - Site 9A						
BLUE (14)	4	1	1	-	-	8
GREEN (15)	2	1	1	-	-	11
WHITE (10)	2	1	1	-	-	6
CYAN (17)	5	1	1	-	-	10
MAGENTA (10)	3	-	2	-	-	5
TOTALS (66)	16/66 (24%)	4/66 (6%)	6/66 (9%)	-	-	40/66 (61%)

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
UV-cured Ink #U1 - Site 11						
BLUE (9)	1	-	-	2	-	6
GREEN (10)	1	1	-	2	-	6
WHITE (11)	1	-	-	4	-	6
CYAN (9)	1	-	-	2	-	6
MAGENTA (9)	2	-	-	2	-	5
TOTALS (48)	6/48 (13%)	1/48 (2%)	-	12/48 (25%)	-	29/48 (60%)
UV-cured Ink #U2 - Site 6						
BLUE (15)	1	1	-	2	-	11
GREEN (15)	1	1	-	2	-	11
WHITE (12)	1	1	-	1	-	9
CYAN (14)	1	1	-	2	-	10
MAGENTA (14)	2	1	-	2	-	9
TOTALS (70)	6/70 (9%)	5/70 (7%)	-	9/70 (13%)	-	50/70 (71%)
UV-cured Ink #U3 - Site 8						
BLUE (9)	-	-	-	3	-	6
GREEN (9)	-	-	-	3	-	6
WHITE (10)	-	-	-	4	-	6
CYAN (9)	-	-	-	3	-	6
MAGENTA (9)	-	-	-	3	-	6
TOTALS (46)	-	-	-	16/46 (35%)	-	30/46 (65%)

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available.

^d Number of chemicals in the color.

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Appendix 3-N (Risk Chapter)
Summary of Occupational
Developmental Toxicity Risk Concern — Inhalation^a

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
Solvent-based Ink #S1 - Site 9B						
BLUE (15) ^d	2	1	-	-	10	2
GREEN (12)	3	2	-	-	6	1
WHITE (13)	1	2	-	-	7	3
CYAN (9)	2	2	-	-	4	1
MAGENTA (14)	4	1	-	-	6	3
TOTALS (63)	12/63 (19%)	8/63 (13%)	-	-	33/63 (52%)	10/63 (16%)
Solvent-based Ink #S2 - Site 5						
BLUE (15)	2	1	-	-	9	3
GREEN (17)	2	1	-	-	11	3
WHITE (10)	-	2	-	-	5	3
CYAN (14)	2	1	-	-	8	3
MAGENTA (14)	2	1	-	-	8	3
TOTALS (70)	8/70 (11%)	6/70 (9%)	-	-	41/70 (59%)	15/70 (21%)
Solvent-based Ink #S2 - Site 7						
BLUE (15)	1	2	-	-	9	3
GREEN (17)	1	2	-	-	11	3
WHITE (11)	1	2	-	-	5	3
CYAN (14)	1	2	-	-	8	3
MAGENTA (14)	1	2	-	-	8	3
TOTALS (71)	5/71 (7%)	10/71 (14%)	-	-	41/71 (58%)	15/71 (21%)
Solvent-based Ink #S2 - Site 10						
BLUE (15)	-	2	1	-	9	3
GREEN (17)	1	2	-	-	11	3
WHITE (11)	1	2	-	-	5	3
CYAN (16)	1	3	-	1	8	3
MAGENTA (16)	2	2	-	1	8	3
TOTALS (75)	5/75 (7%)	11/75 (15%)	1/75 (1%)	2/75 (3%)	41/75 (55%)	15/75 (20%)

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
Water-based Ink #W1 - Site 4						
BLUE (10)	3	-	-	-	5	2
GREEN (10)	3	-	-	-	5	2
WHITE (7)	1	-	-	-	5	1
CYAN (9)	2	-	-	-	6	1
MAGENTA (7)	1	-	-	-	5	1
TOTALS (43)	10/43 (23%)	-	-	-	26/43 (60%)	7/43 (16%)
Water-based Ink #W2 - Site 1						
BLUE (16)	3	1	-	-	9	3
GREEN (9)	-	1	-	-	6	2
WHITE (7)	3	-	-	-	2	2
CYAN (6)	1	-	-	-	3	2
MAGENTA (10)	2	-	-	-	5	3
TOTALS (48)	9/48 (19%)	2/48 (4%)	-	-	25/48 (52%)	12/48 (25%)
Water-based Ink #W3 - Site 2						
BLUE (13)	2	-	-	-	8	3
GREEN (13)	3	-	-	-	7	3
WHITE (12)	3	-	-	-	7	2
CYAN (11)	-	-	-	-	8	3
MAGENTA (13)	2	-	-	-	8	3
TOTALS (62)	10/62 (16%)	-	-	-	38/62 (61%)	14/62 (23%)
Water-based Ink #W3 - Site 3						
BLUE (10)	1	-	-	-	7	2
GREEN (11)	2	-	-	-	6	3
WHITE (12)	2	-	-	-	7	3
CYAN (11)	-	-	-	-	8	3
MAGENTA (12)	1	-	-	-	8	3
TOTALS (56)	6/56 (11%)	-	-	-	36/56 (66%)	14/56 (25%)
Water-based Ink #W4 - Site 9A						
BLUE (14)	5	1	-	-	6	2
GREEN (15)	3	1	-	-	8	3
WHITE (10)	1	1	1	-	5	2
CYAN (17)	5	1	-	-	7	4
MAGENTA (10)	3	1	-	-	4	2
TOTALS (66)	17/66 (26%)	5/66 (8%)	1/66 (2%)	-	30/66 (45%)	13/66 (20%)

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
UV-cured Ink #U1 - Site 11						
BLUE (9)	-	-	-	1	7	1
GREEN (10)	-	1	-	1	7	1
WHITE (11)	-	-	-	1	9	1
CYAN (9)	-	-	-	1	7	1
MAGENTA (9)	-	-	-	1	7	1
TOTALS (48)	-	1/48 (2%)	-	5/48 (10%)	37/48 (77%)	5/48 (10%)
UV-cured Ink #U2 - Site 6						
BLUE (15)	-	1	-	-	12	2
GREEN (15)	-	1	-	-	12	2
WHITE (12)	-	-	1	-	9	2
CYAN (14)	-	1	-	-	11	2
MAGENTA (14)	-	1	-	-	11	2
TOTALS (70)	-	4/70 (6%)	1/70 (1%)	-	55/70 (79%)	10/70 (14%)
UV-cured Ink #U3 - Site 8						
BLUE (9)	-	-	-	2	6	1
GREEN (9)	-	-	-	2	6	1
WHITE (10)	-	-	-	1	8	1
CYAN (9)	-	-	-	2	6	1
MAGENTA (9)	-	-	-	2	6	1
TOTALS (46)	-	-	-	9/46 (19%)	32/46 (70%)	5/46 (11%)

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available.

^d Number of chemicals in the color.

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Appendix 3-O (Risk Chapter)
Summary of General Population
Systemic Toxicity Risk Concern— Inhalation^a

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
Solvent-based Ink #S1 - Site 9B								
BLUE (15) ^d	4	-	-	-	1	-	10	-
GREEN (12)	5	-	-	-	1	-	6	-
WHITE (13)	4	-	-	-	2	-	7	-
CYAN (9)	4	-	-	-	1	-	4	-
MAGENTA (14)	6	-	-	-	1	-	6	1
TOTALS (63)	23/63 (37%)	-	-	-	6/63 (10%)	-	33/63 (52%)	1/63 (2%)
Solvent-based Ink #S2 - Site 5								
BLUE (15)	4	-	-	-	2	-	9	-
GREEN (17)	4	-	-	-	2	-	11	-
WHITE (10)	2	1	-	-	2	-	5	-
CYAN (14)	3	1	-	-	2	-	8	-
MAGENTA (14)	3	1	-	-	2	-	8	-
TOTALS (70)	16/70 (23%)	3/70 (4%)	-	-	10/70 (14%)	-	41/70 (59%)	-
Solvent-based Ink #S2 - Site 7								
BLUE (15)	4	-	-	-	2	-	9	-
GREEN (17)	4	-	-	-	2	-	11	-
WHITE (11)	4	-	-	-	2	-	5	-
CYAN (14)	4	-	-	-	2	-	8	-
MAGENTA (14)	4	-	-	-	2	-	8	-
TOTALS (71)	20/71 (28%)	-	-	-	10/71 (14%)	-	41/71 (58%)	-
Solvent-based Ink #S2 - Site 10								
BLUE (15)	4	-	-	-	2	-	9	-
GREEN (17)	4	-	-	-	2	-	11	-
WHITE (11)	4	-	-	-	2	-	5	-
CYAN (16)	5	-	-	-	3	-	8	-
MAGENTA (16)	5	-	-	-	3	-	8	-
TOTALS (75)	22/75 (29%)	-	-	-	12/75 (16%)	-	41/75 (55%)	-

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
Water-based Ink #W1 - Site 4								
BLUE (10)	5	-	-	-	-	-	5	-
GREEN (10)	5	-	-	-	-	-	5	-
WHITE (7)	2	-	-	-	-	-	5	-
CYAN (9)	3	-	-	-	-	-	6	-
MAGENTA (7)	2	-	-	-	-	-	5	-
TOTALS (43)	17/43 (40%)	-	-	-	-	-	26/43 (60%)	-
Water-based Ink #W2 - Site 1								
BLUE (16)	7	-	-	-	-	-	9	-
GREEN (9)	3	-	-	-	-	-	6	-
WHITE (7)	4	1	-	-	-	-	2	-
CYAN (6)	3	-	-	-	-	-	3	-
MAGENTA (10)	5	-	-	-	-	-	5	-
TOTALS (48)	22/48 (46%)	1/48 (2%)	-	-	-	-	25/48 (52%)	-
Water-based Ink #W3 - Site 2								
BLUE (13)	4	-	-	-	-	-	8	1
GREEN (13)	6	-	-	-	-	-	7	-
WHITE (12)	4	1	-	-	-	-	7	-
CYAN (11)	3	-	-	-	-	-	8	-
MAGENTA (13)	5	-	-	-	-	-	8	-
TOTALS (62)	22/62 (35%)	1/62 (2%)	-	-	-	-	38/62 (61%)	1/62 (2%)
Water-based Ink #W3 - Site 3								
BLUE (10)	3	-	-	-	-	-	7	-
GREEN (11)	4	-	-	-	-	-	7	-
WHITE (12)	3	1	-	-	-	-	8	-
CYAN (11)	3	-	-	-	-	-	8	-
MAGENTA (12)	4	-	-	-	-	-	8	-
TOTALS (56)	17/56 (30%)	1/56 (2%)	-	-	-	-	38/56 (68%)	-
Water-based Ink #W4 - Site 9A								
BLUE (14)	7	-	-	-	1	-	6	-
GREEN (15)	6	-	-	-	1	-	8	-
WHITE (10)	4	-	-	-	1	-	5	-
CYAN (17)	7	-	-	-	1	-	8	1
MAGENTA (10)	5	-	-	-	1	-	4	-
TOTALS (66)	29/66 (44%)	-	-	-	5/66 (8%)	-	31/66 (47%)	1/66 (2%)

Ink system, color	Number of chemicals						No exposure	No data
	Risk-based evaluation ^b			SAT-based evaluation ^c				
	low concern	potential concern	clear concern	low concern	low-moderate concern	moderate concern		
UV-cured Ink #U1 - Site 11								
BLUE (9)	-	-	-	-	1	1	7	-
GREEN (10)	-	-	-	-	1	2	7	-
WHITE (11)	-	-	-	-	1	1	9	-
CYAN (9)	-	-	-	-	1	1	7	-
MAGENTA (9)	-	-	-	-	1	1	7	-
TOTALS (48)	-	-	-	-	5/48 (10%)	6/48 (13%)	37/48 (77%)	-
UV-cured Ink #U2 - Site 6								
BLUE (15)	2	-	-	-	-	1	12	-
GREEN (15)	2	-	-	-	-	1	12	-
WHITE (12)	1	1	-	-	-	1	9	-
CYAN (14)	2	-	-	-	-	1	11	-
MAGENTA (14)	2	-	-	-	-	1	11	-
TOTALS (70)	9/70 (13%)	1/70 (1%)	-	-	-	5/70 (7%)	55/70 (70%)	-
UV-cured Ink #U3 - Site 8								
BLUE (9)	-	-	-	-	1	2	6	-
GREEN (9)	-	-	-	-	1	2	6	-
WHITE (10)	-	-	-	-	1	1	8	-
CYAN (9)	-	-	-	-	1	2	6	-
MAGENTA (9)	-	-	-	-	1	2	6	-
TOTALS (46)	-	-	-	-	5/46 (11%)	9/46 (20%)	32/46 (70%)	-

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available. Criteria for SAT concern levels are presented on page 3-49.

^d Number of chemicals in the color.

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Appendix 3-P (Risk Chapter)
Summary of General Population
Developmental Toxicity Risk Concern — Inhalation^a

Ink system, color	Number of chemicals				SAT developmental concern ^c	No exposure	No data
	Risk-based evaluation ^b						
	low concern	potential concern	clear concern				
Solvent-based Ink #S1 - Site 9B							
BLUE (15) ^d	3	-	-	-	10	2	
GREEN (12)	5	-	-	-	6	1	
WHITE (13)	3	-	-	-	7	3	
CYAN (9)	4	-	-	-	4	1	
MAGENTA (14)	5	-	-	-	6	3	
TOTALS (63)	20/63 (32%)	-	-	-	33/63 (52%)	10/63 (16%)	
Solvent-based Ink #S2 - Site 5							
BLUE (15)	3	-	-	-	9	3	
GREEN (17)	3	-	-	-	11	3	
WHITE (10)	2	-	-	-	5	3	
CYAN (14)	3	-	-	-	8	3	
MAGENTA (14)	3	-	-	-	8	3	
TOTALS (70)	14/70 (20%)	-	-	-	41/70 (59%)	15/70 (21%)	
Solvent-based Ink #S2 - Site 7							
BLUE (15)	3	-	-	-	9	3	
GREEN (17)	3	-	-	-	11	3	
WHITE (11)	3	-	-	-	5	3	
CYAN (14)	3	-	-	-	8	3	
MAGENTA (14)	3	-	-	-	8	3	
TOTALS (71)	15/71 (21%)	-	-	-	41/71 (59%)	15/71 (21%)	
Solvent-based Ink #S2 - Site 10							
BLUE (15)	3	-	-	-	9	3	
GREEN (17)	3	-	-	-	11	3	
WHITE (11)	3	-	-	-	5	3	
CYAN (16)	4	-	-	1	8	3	
MAGENTA (16)	4	-	-	1	8	3	
TOTALS (75)	17/75 (23%)	-	-	2/75 (3%)	41/75 (55%)	15/75 (20%)	

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
Water-based Ink #W1 - Site 4						
BLUE (10)	3	-	-	-	5	2
GREEN (10)	3	-	-	-	5	2
WHITE (7)	1	-	-	-	5	1
CYAN (9)	2	-	-	-	6	1
MAGENTA (7)	1	-	-	-	5	1
TOTALS (43)	10/43 (23%)	-	-	-	26/43 (60%)	7/43 (16%)
Water-based Ink #W2 - Site 1						
BLUE (16)	4	-	-	-	9	3
GREEN (9)	1	-	-	-	6	2
WHITE (7)	3	-	-	-	2	2
CYAN (6)	2	-	-	-	3	1
MAGENTA (10)	3	-	-	-	5	2
TOTALS (48)	13/48 (27%)	-	-	-	25/48 (52%)	10/48 (21%)
Water-based Ink #W3 - Site 2						
BLUE (13)	2	-	-	-	8	3
GREEN (13)	4	-	-	-	7	2
WHITE (12)	3	-	-	-	7	2
CYAN (11)	-	-	-	-	8	3
MAGENTA (13)	2	-	-	-	8	3
TOTALS (62)	11/62 (18%)	-	-	-	38/62 (61%)	13/62 (21%)
Water-based Ink #W3 - Site 3						
BLUE (10)	1	-	-	-	7	2
GREEN (11)	2	-	-	-	7	2
WHITE (12)	2	-	-	-	7	3
CYAN (11)	-	-	-	-	8	3
MAGENTA (12)	1	-	-	-	8	3
TOTALS (56)	6/56 (11%)	-	-	-	37/56 (66%)	13/56 (23%)
Water-based Ink #W4 - Site 9A						
BLUE (14)	6	-	-	-	6	2
GREEN (15)	4	-	-	-	8	3
WHITE (10)	3	-	-	-	5	2
CYAN (17)	6	-	-	-	7	4
MAGENTA (10)	4	-	-	-	4	2
TOTALS (66)	23/66 (35%)	-	-	-	30/66 (45%)	13/66 (20%)

Ink system, color	Number of chemicals				No exposure	No data
	Risk-based evaluation ^b			SAT developmental concern ^c		
	low concern	potential concern	clear concern			
UV-cured Ink #U1 - Site 11						
BLUE (9)	-	-	-	1	7	1
GREEN (10)	1	-	-	1	7	1
WHITE (11)	-	-	-	1	9	1
CYAN (9)	-	-	-	1	7	1
MAGENTA (9)	-	-	-	1	7	1
TOTALS (48)	1/48 (2%)	-	-	5/48 (10%)	37/48 (77%)	5/48 (10%)
UV-cured Ink #U2 - Site 6						
BLUE (15)	1	-	-	-	12	2
GREEN (15)	1	-	-	-	12	2
WHITE (12)	1	-	-	-	9	2
CYAN (14)	1	-	-	-	11	2
MAGENTA (14)	1	-	-	-	11	2
TOTALS (70)	5/70 (7%)	-	-	-	55/70 (79%)	10/70 (14%)
UV-cured Ink #U3 - Site 8						
BLUE (9)	-	-	-	2	6	1
GREEN (9)	-	-	-	2	6	1
WHITE (10)	-	-	-	1	8	1
CYAN (9)	-	-	-	2	6	1
MAGENTA (9)	-	-	-	2	6	1
TOTALS (46)	-	-	-	9/46 (20%)	32/46 (70%)	5/46 (10%)

^a The numbers in each column show the number of chemicals within each risk-based or SAT-based classification.

^b Criteria for level of concern are presented in Table 3.15 (page 3-48).

^c SAT concern levels are generated by the OPPT Structure Activity Team to predict toxicity based on analog data and/or structure-activity considerations. SAT concern levels are provided for chemicals with insufficient systemic hazard data available.

^d Number of chemicals in the color.

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