Guide for Cannabis Solubility

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Guide for Cannabis Solubility

Solubility (µg/mL at 20°C)	
≥ 1000	Excellent Solubility
< 1000	Good Solubility
< 500	Moderate Solubility
< 100	Low Solubility
< 10	Insoluble
N/D	No Data

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Water						
Acetone	Miscible					
Methanol	Miscible	Miscible				
Acetonitrile	Miscible	Miscible	Miscible			
Ethyl Acetate	Immiscible	Miscible	Miscible	Miscible		
Methylene Chloride	Immiscible	Miscible	Miscible	Miscible	Miscible	
n-Hexane	Immiscible	Miscible	Immiscible	Immiscible	Miscible	Miscible

	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Molecular Weight (MW)	18.02	58.05	32.04	41.05	88.11	84.93	86.18
UV Cutoff (nm)	200	330	205	190	260	235	200
BP (°C @ 1 atm)	100.0	56.1	64.7	81.6	77.1	39.5	69.0
Polarity Index (Snyder)	9.0	5.1	5.1	5.8	4.4	3.1	0.0
Viscosity (cP)	1.00	0.32	0.60	0.37	0.45	0.44	0.33
Solubility in Water (% wt/wt)	100%	100%	100%	100%	9%	2%	0%

											Solubility (µg/mL)						
Compound	CAS #	MW	Class	Group	Molecular Formula	BP (°C @ 1 atm)	MP (°C @ 1 atm)	Density (g/cm³ @ 20°C)	Color	Form	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Abamectin (Mix of Isomers)	71751-41-2	B1a: 872 B1b: 858	Insecticide	Macrocyclic Lactone	$C_{48}H_{72}O_{14}$ (B1a) $C_{47}H_{70}O_{14}$ (B1b)	N/D	157	1.16	White to Yellow	Crystalline Silica	< 10	≥ 1000	≥ 1000	≥ 1000	N/D	N/D	N/D
Acephate	30560-19-1	183.2	Insecticide	Organophosphate	$C_4H_{10}NO_3PS$	Decomposes	89	1.35	Colorless to White	Crystalline Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Acequinocyl	57960-19-7	384.5	Acaricide	Quinoline	$C_{24}H_{32}O_4$	Decomposes	60	1.13	Yellowish to Tan	Flaky Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Acetamiprid	135410-20-7	222.7	Insecticide	Neonicotinoid	$C_{10}H_{11}ClN_4$	Decomposes	99	1.33	White to Yellow	Crystalline or Waxy Solid	>1000	>1000	>1000	>1000	>1000	>1000	<10
Aldicarb	116-06-3	190.3	Acaricide	Carbamate	$C_7H_{14}N_2O_2S$	Decomposes	99	1.20	Colorless to White	Crystalline Solid	>1000	>1000	>1000	>1000	>1000	>1000	>1000
Allethrin	584-79-2	302.4	Insecticide	Pyrethroid	$C_{19}H_{26}O_3$	281.5	ND	1.01	Amber	Oily Liquid	<10	≥1000	≥1000	>1000	>1000	>1000	N/D
Ancymidol	12771-68-5	256.3	Plant Growth Regulator	Pyrimidinyl Carbinol	$C_{15}H_{16}N_2O_2$	Decomposes	110.5	0.42	White	Crystals	<1000	≥1000	≥1000	≥1000	N/D	N/D	≥1000
Azadirachtin	11141-17-6	720.7	Insecticide	Limonoid	$C_{35}H_{44}O_{16}$	792.4	156.5	1.50	Yellow to Green	Powder	<500	≥1000	≥1000	>1000	≥1000	N/D	<10
Azoxystrobin	131860-33-8	403.4	Fungicide	Strobilurin	$C_{22}H_{17}N_3O_5$	360	116	1.34	White	Crystalline Solid	<10	>1000	>1000	>1000	>1000	>1000	<100
Baygon	114-26-1	209.2	Insecticide	Carbamate	$C_{11}H_{15}NO_3$	Decomposes	90	1.18	White to Tan	Crystalline or Waxy Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Benzovindiflupyr	1072957-71-1	398.2	Fungicide	Amide	$C_{18}H_{15}Cl_2F_2N_3O$	Decomposes	148.4	ND	White	Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Bifenazate	149877-41-8	300.4	Acaricide	Hydrazine Carboxylate	$C_{17}H_{20}N_2O_3$	Decomposes	122	1.31	White to Tan	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Bifenthrin	82657-04-3	422.9	Insecticide	Pyrethroid	$C_{23}H_{22}ClF_3O_2$	Decomposes	80	1.26	Off-White to Brown	Semi-Solid or Liquid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Boscalid	188425-85-6	343.2	Fungicide	Carboxamide	$C_{18}H_{12}Cl_2N_2O$	Decomposes	143	1.38	White	Crystalline Solid	<10	>1000	>1000	>1000	>1000	>1000	>1000
Buprofezin	69327-76-0	305.4	Insecticide	Unclassified	$C_{16}H_{23}N_3OS$	252	105.1	1.18	White	Crystals	<10	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Captan	133-06-2	300.61	Fungicide, Bactericide	Phthalimide	$C_9H_8Cl_3NO_2S$	Decomposes	174	1.68	White to Cream	Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Carbaryl	63-25-2	201.2	Insecticide	Carbamate	$C_{12}H_{11}NO_2$	210	138	1.21	White or Grey	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Carbofuran	1563-66-2	221.3	Acaricide	Carbamate	$C_{12}H_{15}NO_3$	254	153	1.26	White	Crystalline Solid	<500	≥1000	≥1000	≥1000	≥1000	≥1000	N/D

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n-Hexane	Immiscible	Miscible	Immiscible	Immiscible	Miscible	Miscible

	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
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Viscosity (cP)	1.00	0.32	0.60	0.37	0.45	0.44	0.33
Solubility in Water (% wt/wt)	100%	100%	100%	100%	9%	2%	0%

											Solubility (µg/mL)						
Compound	CAS #	MW	Class	Group	Molecular Formula	BP (°C @ 1 atm)	MP (°C @ 1 atm)	Density (g/cm³ @ 20°C)	Color	Form	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Chlorantraniliprole	500008-45-7	483.1	Insecticide	Anthranilic Diamide	$C_{18}H_{14}BrCl_2N_5O_2$	Decomposes	209	1.51	Off-White	Crystalline Solid or Powder	<10	>1000	>1000	<1000	>1000	>1000	N/D
Chlordane	57-74-9	409.78	Insecticide	Organochlorine	$C_{10}H_6Cl_8$	ND	106	1.61	Yellow to Brown	Oily Liquid to Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Chlorfenapyr	122453-73-0	407.6	Insecticide	Pyrrole	$C_{15}H_{11}BrClF_3N_2O$	ND	101	1.53	White to Yellow	Powder	<10	N/D	≥1000	≥1000	≥1000	≥1000	≥1000
Chlormequat Chloride	999-81-5	158.07	Plant Growth Regulator	Quarternary Ammonium Compound	$C_5H_{13}Cl_2N$	Decomposes	225	1.15	White	Crystals	≥1000	<500	≥1000	≥1000	<10	N/D	N/D
Chlorpyriphos	2921-88-2	350.6	Acaricide	Organophosphate	$C_9H_{11}Cl_3NO_3PS$	Decomposes	41	1.43	Colorless to Amber	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Clofentezine	74115-24-5	303.1	Miticide	Tetrazine	$C_{14}H_8Cl_2N_4$	Decomposes	183	1.52	Red	Crystalline Solid	<10	≥1000	<1000	≥1000	≥1000	≥1000	<1000
Clothianidin	21088-92-5	249.7	Insecticide, Metabolite	Neonicotinoid	$C_6H_8ClN_5O_2S$	Decomposes	176.8	1.61	Colorless or White	Powder	<500	≥1000	≥1000	≥1000	<500	≥1000	N/D
Coumaphos	56-72-4	362.8	Insecticide, Rodenticide	Phosphorothioate	$C_{14}H_{16}ClO_5PS$	N/D	95	1.41	Colorless	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	<1000
Cyantraniliprole	736994-63-1	473.7	Insecticide	Diamide	$C_{19}H_{14}BrClN_6O_2$	224	217-219	1.50	White	Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	<10
Cyfluthrin	68359-37-5	434.3	Insecticide	Pyrethroid	$C_{22}H_{18}Cl_2FNO_3$	Decomposes	79	1.28	Yellow to Brown	Semi-Solid or Liquid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Cypermethrin	52315-07-8	416.3	Insecticide	Pyrethroid	$C_{22}H_{19}Cl_2NO_3$	Decomposes	41	1.25	Yellow	Crystalline or Waxy Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Cyprodinil	121552-61-2	225.3	Fungicide	Anilinopyrimidine	$C_{14}H_{15}N_3$	ND	75.9	1.21	White or Beige	Crystal or Powder	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Daminozide	1596-84-5	160.2	Plant Growth Regulator	Unclassified	$C_6H_{12}N_2O_3$	Decomposes	153	1.30	Colorless or White	Solid	≥1000	≥1000	≥1000	≥1000	<500	N/D	<10
Deltamethrin	52918-63-5	505.2	Insecticide	Pyrethroid	$C_{22}H_{19}Br_2NO_3$	Decomposes	101	0.55	Colorless or White	Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Diazinon	333-41-5	304.3	Acaricide	Organophosphate	$C_{12}H_{21}N_2O_3PS$	Decomposes	N/D	1.11	Colorless to Amber	Oily Liquid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Dichlorvos	62-73-7	221.0	Acaricide	Organophosphate	$C_4H_7C1_2O_4P$	Decomposes	N/D	1.42	Colorless to Amber	Liquid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000

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Water							
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Methanol	Miscible	Miscible					
Acetonitrile	Miscible	Miscible	Miscible				
Ethyl Acetate	Immiscible	Miscible	Miscible	Miscible			
Methylene Chloride	Immiscible	Miscible	Miscible	Miscible	Miscible		
n-Hexane	Immiscible	Miscible	Immiscible	Immiscible	Miscible	Miscible	

	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Molecular Weight (MW)	18.02	58.05	32.04	41.05	88.11	84.93	86.18
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Viscosity (cP)	1.00	0.32	0.60	0.37	0.45	0.44	0.33
Solubility in Water (% wt/wt)	100%	100%	100%	100%	9%	2%	0%

											Solubility (µg/mL)						
Compound	CAS #	MW	Class	Group	Molecular Formula	BP (°C @ 1 atm)	MP (°C @ 1 atm)	Density (g/cm³ @ 20°C)	Color	Form	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Dimethoate	60-51-5	229.2	Acaricide	Organophosphate	$C_5H_{12}NO_3PS_2$	Decomposes	50.5	1.31	White	Crystalline Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	<500
Dimethomorph	110488-70-5	387.9	Fungicide	Morpholine	$C_{21}H_{22}ClNO_4$	N/D	137	1.32	Colorless or Grey	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	<500	<500
Dinotefuran	165252-70-0	202.2	Insecticide	Neonicotinoid	$C_7H_{14}N_4O_3$	Decomposes	107.5	1.42	White	Crystals	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	<10
Dodemorph	1593-77-7	281.5	Fungicide	Morpholine	$C_{18}H_{35}NO$	ND	41.5	0.89	Colorless or White	Solid	<100	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Endosulfan I (alpha)	959-98-8	406.9	Insecticide	Organochlorine	$C_9H_6Cl_6O_3S$	401.8	109.2	1.94	Brown	Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Endosulfan II (beta)	33213-65-9	406.9	Insecticide	Organochlorine	$C_9H_6Cl_6O_3S$	449.7	209	2.00	Brown	Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Endosulfan Sulfate	1031-07-8	422.9	Metabolite	Organochlorine	$C_9H_6Cl_6O_4S$	ND	181.5	1.94	White	Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Ethephon	16672-87-0	144.49	Plant Growth Regulator	Ethylene Generator	$C_2H_6ClO_3P$	Decomposes	73.3	1.65	White	Crystals	≥1000	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Ethoprophos	13194-48-4	242.3	Nematicide	Organophosphate	$C_8H_{19}O_2PS_2$	244	70	1.09 WC	Yellow	Oily Liquid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Etofenprox	80844-07-1	376.5	Insecticide	Pyrethroid	$C_{25}H_{28}O_3$	Decomposes	37	1.17	White	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Etoxazole	153233-91-1	359.4	Insecticide	Diphenyl Oxazoline	$C_{21}H_{23}F_2NO_2$	N/D	102	1.24	White	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	N/D	≥1000
Etridiazole (Terrazole)	2593-15-9	247.5	Fungicide	Aromatic Hydrocarbon	$C_5H_5Cl_3N_2OS$	113	19.9	1.50	Colorless to Brown	Semi-Solid	<100	≥1000	≥1000	≥1000	≥1000	N/D	≥1000
Fenhexamid	126833-17-8	302.2	Fungicide	Hydroxyanilide	$C_{14}H_{17}Cl_2NO_2$	230	153.8	1.34	White	Powder	<100	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Fenoxycarb	79127-80-3	301.3	Insecticide	Carbamate	$C_{17}H_{19}NO_4$	100	54	1.23	White	Flaky Powder or Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Fenpyroximate (Mix of Isomers)	111812-58-9	421.5	Acaricide	Pyrazolium	$C_{24}H_{27}N_3O_4$	Decomposes	100	1.25	White	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Fensulfothion	115-90-2	308.4	Insecticide	Organophosphate	$C_{11}H_{17}O_4PS_2$	138	25	1.20	Yellow or Brown	Oily Liquid	≥1000	≥1000	≥1000	≥1000	≥1000		≥1000
Fenthion	55-38-9	278.3	Insecticide	Organophosphate	$C_{10}H_{15}O_3PS_2$	90	7	1.25	Colorless to Amber	Oily Liquid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Fenvalerete	51630-58-1	419.9	Insecticide	Pyrethroid	$C_{25}H_{22}ClNO_3$	Decomposes	39	1.18	Yellow to Brown	Crystalline or Waxy Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000

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	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
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Fipronil	120068-37-3	437.1	Insecticide	Phenylpyrazole	$C_{12}H_4Cl_2F_6N_4OS$	Decomposes	203	1.71	White	Solid Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Flonicamid	158062-67-0	229.2	Insecticide	Pyridine Compound	$C_9H_6F_3N_3O$	Decomposes	157	1.54	White to Off-White	Crystalline Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Fludioxonil	131341-86-1	248.2	Fungicide	Phenylpyrazole	$C_{12}H_6F_2N_2O_2$	Decomposes	200	1.54	Colorless to Yellow	Crystalline Solid	<10	≥1000	>1000	>1000	>1000	>1000	<100
Flurprimidol	56425-91-3	312.29	Plant Growth Regulator	Pyrimidinyl Carbinol	$C_{15}H_{15}F_3N_2O_2$	264	95.3	1.34	White to Cream	Crystals	<500	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Fluopyram	658066-35-4	396.8	Fungicide	Benzamide, Pyramide	$C_{16}H_{11}ClF_6N_2O$	318	117.5	1.53	White	Powder	<100	≥1000	>1000	>1000	>1000	>1000	>1000
Hexythiazox	78587-05-0	352.9	Acaricide	Carboxamide	$C_{17}H_{21}ClN_2O_2S$	222	105.4	1.31	Colorless to Off-White	Crystalline Solid or Powder	<10	≥1000	>1000	>1000	>1000	>1000	>1000
Imazalil	35554-44-0	297.2	Fungicide	Imidazole	$C_{14}H_{14}Cl_2N_2O$	Decomposes	51	1.35	Yellow to Brown	Solidified Oil	<500	>1000	>1000	>1000	>1000	>1000	>1000
Imidacloprid	138261-41-3	255.7	Insecticide	Neonicotinoid	$C_9H_{10}ClN_5O_2$	Decomposes	144	1.54	Colorless to Off-White	Crystalline Solid	<1000	>1000	>1000	>1000	>1000	>1000	<100
Iprodione	36734-19-7	330.2	Fungicide	Dicarboximide	$C_{13}H_{13}Cl_2N_3O_3$	164	134	1.51	Colorless to White	Crystalline Solid	<10	>1000	>1000	>1000	>1000	>1000	<1000
Kinoprene	42588-37-4	276.4	Insecticide	Juvenile Hormone Analogue	$C_{18}H_{28}O_2$	356.4	<25	0.92	Amber	Liquid	<10	N/D	N/D	>1000	N/D	N/D	N/D
Kresoxim-methyl	143390-89-0	313.3	Fungicide	Strobilurin	$C_{18}H_{19}NO_4$	Decomposes	102	1.26	White to Off-White	Crystalline Solid	<10	>1000	>1000	>1000	>1000	>1000	>1000
Malathion	121-75-5	330.4	Acaricide	Organophosphate	$C_{10}H_{19}O_6PS_2$	Decomposes	-20	1.21 CRC	Colorless to Amber	Liquid	<500	>1000	>1000	>1000	>1000	>1000	>1000
Metalaxyl	57837-19-1	279.3	Fungicide	Phenylamide	$C_{15}H_{21}NO_4$	296	72	1.20	Colorless to White	Crystalline Solid	≥1000	>1000	>1000	>1000	>1000	>1000	>1000
Methiocarb	2032-65-7	225.3	Insecticide	Carbamate	$C_{11}H_{15}NO_2S$	311	118	1.25	Colorless to White	Crystalline Solid	<100	>1000	>1000	>1000	>1000	>1000	>1000
Methomyl	16752-77-5	162.2	Insecticide	Carbamate	$C_5H_{10}N_2O_2S$	Decomposes	80	1.32	White	Crystalline Solid	≥1000	>1000	>1000	>1000	>1000	>1000	N/D
Methoprene	40596-69-8	310.5	Insecticide	Terpene	$C_{19}H_{34}O_3$	256	ND	0.92	Yellow or Brown	Liquid	<10	>1000	>1000	>1000	N/D	>1000	N/D

Guide for Cannabis Solubility

Solubility (µg/mL at 20°C)	
≥ 1000	Excellent Solubility
< 1000	Good Solubility
< 500	Moderate Solubility
< 100	Low Solubility
< 10	Insoluble
N/D	No Data

Red text = SPEX data shows minimum solubility @ 1,000 µg/mL
Yellow text = Minimum solubility based on similar solvent cited
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NOTE: All values are a compilation of resources and reference lists that are available upon request.

Water						
Acetone	Miscible					
Methanol	Miscible	Miscible				
Acetonitrile	Miscible	Miscible	Miscible			
Ethyl Acetate	Immiscible	Miscible	Miscible	Miscible		
Methylene Chloride	Immiscible	Miscible	Miscible	Miscible	Miscible	
n-Hexane	Immiscible	Miscible	Immiscible	Immiscible	Miscible	Miscible

	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Molecular Weight (MW)	18.02	58.05	32.04	41.05	88.11	84.93	86.18
UV Cutoff (nm)	200	330	205	190	260	235	200
BP (°C @ 1 atm)	100.0	56.1	64.7	81.6	77.1	39.5	69.0
Polarity Index (Snyder)	9.0	5.1	5.1	5.8	4.4	3.1	0.0
Viscosity (cP)	1.00	0.32	0.60	0.37	0.45	0.44	0.33
Solubility in Water (% wt/wt)	100%	100%	100%	100%	9%	2%	0%

											Solubility (µg/mL)						
Compound	CAS #	MW	Class	Group	Molecular Formula	BP (°C @ 1 atm)	MP (°C @ 1 atm)	Density (g/cm³ @ 20°C)	Color	Form	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Methyl Parathion	298-00-0	263.2	Insecticide	Organophosphate	$C_8H_{10}NO_5PS$	N/D	35	1.36	Colorless to White	Crystalline Solid	<100	>1000	>1000	>1000	>1000	>1000	>1000
Mevinphos	7786-34-7	224.1	Insecticide	Organophosphate	$C_7H_{13}O_6P$	Decomposes	21	1.24	Yellow	Liquid	≥1000	>1000	>1000	>1000	>1000	>1000	>1000
MGK-264	113-48-4	275.4	Pesticide Synergist	Unclassified	$C_{17}H_{25}NO_2$	157	-20	1.05	Yellow	Liquid	<100	>1000	>1000	>1000	>1000	>1000	N/D
Myclobutanil	88671-89-0	288.8	Fungicide	Triazole	$C_{15}H_{17}ClN_4$	391	71	1.24	White to Yellow	Crystalline Solid	<500	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Naled (Systhane) (Dibrom)	300-76-5	380.8	Insecticide	Organophosphate	$C_4H_7Br_2Cl_2O_4P$	200	27	1.97	Colorless to Yellow	Liquid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Novaluron	116714-46-6	492.7	Insecticide	Benzoylurea	$C_{17}H_9ClF_8N_2O_4$	ND	177	1.56	White to Pink	Powder	<10	N/D	≥1000	≥1000	≥1000	≥1000	N/D
Oxamyl	23135-22-0	219.3	Insecticide	Carbamate	$C_7H_{13}N_3O_3S$	Decomposes	99	1.31	Colorless to White	Crystalline Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Paclobutrazol	76738-62-0	293.8	Herbicide & Fungicide	Triazole	$C_{15}H_{20}ClN_3O$	384	164	1.23	White to Tan	Solid Powder or Crystal	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Permethrin (Mix of Isomers)	52645-53-1	391.3	Insecticide	Pyrethroid	$C_{21}H_{20}Cl_2O_3$	200	34	1.29	Colorless to Brown	Oily Liquid or Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Phenothrin (d-Phenothrin)	26002-80-2	350.5	Insecticide	Pyrethroid	$C_{23}H_{26}O_3$	290	ND	1.06	Yellow or Brown	Liquid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Phosmet	732-11-6	317.3	Insecticide	Organophosphate	$C_{11}H_{12}NO_4PS_2$	Decomposes	71.8	1.44	Off-White	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Phosmet (Oxon)	3735-33-9	301.26	Insecticide, Metabolite	Organophosphate	$C_{11}H_{12}NO_5PS$	ND	ND	ND	White	Powder	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Piperonyl Butoxide	51-03-6	338.4	Insecticide	Cyclic Aromatic	$C_{19}H_{30}O_5$	N/D	N/D	1.06	Yellow to Brown	Oily Liquid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Pirimicarb	23103-98-2	238.3	Insecticide	Carbamate	$C_{11}H_{18}N_4O_2$	N/D	92	1.18	Colorless to White	Crystalline Solid	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Prallethrin (Mix of Isomers)	23031-36-9	300.4	Insecticide	Pyrethroid	$C_{19}H_{24}O_3$	313	-25	1.03	Yellow to Brown	Oily Liquid	<10	≥1000	≥1000	≥1000	≥1000	N/D	≥1000
Propiconazole	60207-90-1	342.2	Fungicide	Triazole	$C_{15}H_{17}Cl_2N_3O_2$	Decomposes	-23	1.09	Colorless to Yellow	Oily Liquid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Pyraclostrobin	175013-18-0	387.8	Fungicide	Strobilurin	$C_{19}H_{18}ClN_3O_4$	Decomposes	64	1.37	White to Tan	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	<500
Pyrethrin (Mix of Isomers)	8003-34-7	328.4	Insecticide	Pyrethroid	$C_{21}H_{28}O_3$	N/D	142	0.85	Yellow to Brown	Oily Liquid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000

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n-Hexane	Immiscible	Miscible	Immiscible	Immiscible	Miscible	Miscible

	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Molecular Weight (MW)	18.02	58.05	32.04	41.05	88.11	84.93	86.18
UV Cutoff (nm)	200	330	205	190	260	235	200
BP (°C @ 1 atm)	100.0	56.1	64.7	81.6	77.1	39.5	69.0
Polarity Index (Snyder)	9.0	5.1	5.1	5.8	4.4	3.1	0.0
Viscosity (cP)	1.00	0.32	0.60	0.37	0.45	0.44	0.33
Solubility in Water (% wt/wt)	100%	100%	100%	100%	9%	2%	0%

											Solubility (µg/mL)						
Compound	CAS #	MW	Class	Group	Molecular Formula	BP (°C @ 1 atm)	MP (°C @ 1 atm)	Density (g/cm³ @ 20°C)	Color	Form	Water	Acetone	Methanol	Acetonitrile	Ethyl Acetate	Methylene Chloride	n-Hexane
Pyridaben	96489-71-3	364.9	Acaricide	Pyridazinone	$C_{19}H_{25}ClN_2OS$	Decomposes	109	1.20	Colorless to White	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Quintozene	82-68-8	295.3	Fungicide	Chlorophenyl	$C_6Cl_5NO_2$	328	143	1.72	Yellow	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Resmethrin (Mix of Isomers)	10453-86-8	338.4	Insecticide	Pyrethroid	$C_{22}H_{26}O_3$	Decomposes	56	0.96	Colorless to Tan	Oily Liquid or Crystals	<10	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Spinetoram (J)	187166-40-1	748.0	Insecticide	Spinosyn	$C_{42}H_{69}NO_{10}$	Decomposes	107	N/D	Off-White	Solid	<100	≥1000	≥1000	≥1000	N/D	N/D	≥1000
Spinosad (Mixture of A and D)	168316-95-8	A: 732 & D: 746	Insecticide	Micro-Organism Derived	$C_{41}H_{65}NO_{10}$ (Spinosyn A) + $C_{42}H_{67}NO_{10}$ (Spinosyn D)	225	136	0.51	White-Grey	Crystals	<10	≥1000	≥1000	≥1000	≥1000	N/D	≥1000
Spirodiclofen	148477-71-8	411.3	Acaricide	Tetronic Acid	$C_{21}H_{24}Cl_2O^4$	Decomposes	95	1.29	White	Solid Powder	<10	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Spiromesifen	283594-90-1	370.5	Acaricide	Tetronic Acid	$C_{23}H_{30}O_4$	Decomposes	98	1.13	Colorless to White	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Spirotetramat	203313-25-1	373.4	Insecticide	Tetramic Acid	$C_{21}H_{27}NO_5$	Decomposes	142	1.22	Off-White to Tan	Powder	<100	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Spiroxamine	118134-30-8	297.5	Fungicide	Morpholine	$C_{18}H_{35}NO_2$	Decomposes	-170	0.93	Yellow	Liquid	<500	≥1000	≥1000	≥1000	N/D	N/D	N/D
Tebuconazole	107534-96-3	307.8	Fungicide	Triazole	$C_{16}H_{22}ClN_3O$	Decomposes	105	1.25	Colorless	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	≥1000	<100
Tebufenozide	112410-23-8	352.5	Insecticide	Diacylhydrazine	$C_{22}H_{28}N_2O_2$	Decomposes	191	1.03	Off-White	Powder	<10	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Teflubenzuron	83121-18-0	381.1	Insecticide	Benzoylurea	$C_{14}H_6Cl_2F_4N_2O_2$	Decomposes	225	1.66	White to Yellow	Crystals	<10	≥1000	≥1000	≥1000	≥1000	N/D	N/D
Tetrachlorvinphos	22248-79-9	366.0	Insecticide	Organophosphate	$C_{10}H_9Cl_4O_4P$	ND	94	1.52	Colorless or White	Crystals	<100	≥1000	≥1000	≥1000	≥1000	≥1000	N/D
Tetramethrin	7696-12-0	331.4	Insecticide	Pyrethroid	$C_{19}H_{25}NO_4$	N/D	69	1.11	Colorless	Crystalline Solid	<10	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000
Thiacloprid	111988-49-9	252.7	Insecticide	Neonicotinoid	$C_{10}H_9ClN_4S$	Decomposes	136	1.46	Colorless to Off-White	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	N/D	<100
Thiamethoxam	153719-23-4	291.7	Fungicide & Insecticide	Neonicotinoid	$C_8H_{10}ClN_5O_3S$	Decomposes	139	1.57	Light Brown	Solid Powder	≥1000	≥1000	≥1000	≥1000	≥1000	≥1000	<10
Thiophanate-methyl	23564-05-8	342.4	Fungicide	Benzimidazole	$C_{12}H_{14}N_4O_4S_2$	Decomposes	Decom-poses	1.45	Colorless	Crystalline Solid	<100	≥1000	≥1000	≥1000	≥1000	<500	<10
Trifloxystrobin	141517-21-7	408.4	Fungicide	Strobilurin	$C_{20}H_{19}F_3N_2O_4$	312	73	1.36	White	Powder Solid	<10	≥1000	≥1000	≥1000	≥1000	N/D	N/D