

TABLE 13 – Toxicity, Solubility, Adsorptivity and Persistence of Herbicides

Trade Name	Toxicity ¹ LD ₅₀ mg/kg		Water Solubility (ppm at 25°C)	Adsorptivity to Soil	Soil Persistence at Standard Rate (months)	Runoff/ Leaching Potential ²
	Oral	Dermal				
Accent Q	>5000	>2000	70 (pH 7.0)	weak–moderate	1–10	3/1
Affinity BroadSpec	>5000	>2000	*	*	0.5	2/2
Aim	>5000	>5000	22	strong	–	–/–
Armezon/Impact	>2000	>4000	15,000 ppm@20° C	moderate	1–8	–/–
Assure II	4100–5900	>2000	<1	moderate	0.5	1/2
Atrazine	1075–4346	>3100	33	strong	2–8	2/1
Authority XL	1750	>5000	–	strong	2–10	2/1
Balance Flexx	>2000	>2000	6.8	strong	–	–/–
Banvel/Clarity	2629–3512	>2000	4500	weak	1–6	3/1
Basagran	2063	>10,000	500	weak	0.5	3/1
Basis Blend	>5000	>2000	–	–	–	–/–
Beacon	>5050	>2010	18,000 (pH 7.2)	weak	1–5	2/1
Callisto	>5000	>5000	–	–	–	–
Capreno	>2000	>2000	–	–	–	–
Classic	>5000	>2000	300	strong	1–10	2/1
Cobra	2400–2600	>2000	0.1	strong	0.5	2/3
Command	2084–5000	2000–5000	1100	v. strong	3–6	2/2
2,4-D	375–1492	>2000	900	weak	1	2/2
2,4-DB	>1706	2000	insoluble	weak	1	2/3
Dual II Magnum	2672–2952	>2020	530	strong	1–3	2/1
Eptam	1325–5000	1500–5000	370	strong	1.5–2	2/3
Express	>5000	>2000	286	–	0.5	2/2
FirstRate	>5000	>2000	184	moderate	1–4	–/–
glyphosate**	>5000	>5000	900,000 (pH 7.0)	v. strong	1	1/3
Gramoxone SL	310	>2000	infinite	v. strong	1	1/3
Harmony Extra	>5000	>2000	*	*	0.5	2/2
Harmony	>5000	>2000	2400	–	0.25	2/2
Harness	1249–2948	4166–5000	223	moderate	1–2	2/2
Hornet	>5000	>5000	–	–	–	3/1
Kerb	>5000	>2000	15	strong	2–9	2/1
Laudis	1750	5000	–	–	–	1/1
Liberty	2119-2030	1390-5319	–	–	–	–/–
Lorox	3600–4833	>2000	75	v. strong	2–4	1/2
Matrix	>5000	>2000	–	–	0	–/–
MCPA	800	1500	insoluble	v. weak	1–4	1/3
Metribuzin	1500–2794	>5000	1200	moderate	2–4	2/1
Moxy	780	2000	50	moderate	0.5	2/3
Nortron SC/Ethotron	>2100	>4100	110	strong	1–4	2/2
Osprey	>2000	>2000	–	–	–	–/–
Outlook	695	>2000	1174	moderate	1–2	2/2

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	Oral	Dermal				
Permit	1287	>5000	15	–	–	2/2
Poast	2200–4100	2000–5000	48	moderate	0.25	2/3
Princep	>5000	2000–2500	5	strong	2–8	2/1
Prowl/Prowl H ₂ O	3956	>2200	<1	v. strong	3–6	1/3
Pursuit	3506–5000	>2000	1,400	weak	2–8	1/1
Python	>5000	>2000	49	moderate	2–8	3/1
Raptor	>5000	>4000	–	weak	1–2	–/–
Reglone	600–810	260–315	infinite	v. strong	–	1/3
Reflex/Flexstar	3683–8160	>1000	600,000	weak	6	2/1
Resolve Q	1611	>2000	–	–	–	1/1
Resource	3200–4100	>2000	0.189	strong	–	3/2
Ro-Neet	3160–3690	>4640	85	strong	1–3	2/2
Select Max	2920–3610	>5000	infinite	moderate	0.25	3/3
Sharpen	>2000	>5000	2100	weak	0.5	–
Sinbar	5000–7500	>5000	710	moderate	5–6	2/1
Sonalan	3300–5000	>5000	1	v. strong	3–5	1/3
Spartan	2416	>5000	110	moderate	2–8	–/–
Steadfast Q	>5000	>2000	–	–	–	–
Stinger HL	>5000	>5000	1000	moderate	1–10	3/1
Surpass NXT	1249–2948	4165–5000	223	moderate	1–2	2/2
Synchrony XP	>5000	>2000	300	strong	1–10	2/1
Trifluralin	3738	>2000	<1	v. strong	3–6	1/3
Ultra Blazer	4790	3250	infinite	strong	1	2/2
Upbeet	>5000	>2000	110 (pH 7.0)	weak	–	–/–
Valor/Valor EZ	>5000	>2000	1.78	–	–	–
Velpar	1100–4120	>5000	33,000	strong	4–6	2/1
Verdict	>2000	>5000	–	moderate	1-2	2/2
Vida	>5000	>2000	–	–	–	–
Warrant	>5000	>5000	223	moderate	1-2	2/2
WideMatch	>5000	>5000	1000	moderate	1-10	3/1
Zidua	>2000	>2000	3.49 @ 20° C	weak	1-2	–/–
(Table Salt)	3320	–	360,000	–	–	–
(Aspirin)	1200	–	2,500	–	–	–

– No information available; Sources: Herbicide Handbook

1 The LD50 is a standard toxicological term which indicates the number of milligrams (mg) of pesticide per kilogram (kg) of test animal body weight required to kill 50% of a test animal population. Values less than 10 indicate extremely high toxicity to mammals. The LD50 data have been obtained from the Material Data Safety Sheets.

2 The runoff/leaching potential ratings are from the ARS/NRCS pesticide properties database and were developed for use with the NRCS soils ratings for water quality in the NRCS “Soil-Pesticide Interaction Ratings.” 1=high, 2=medium, 3=low.

** Glyphosate IPA salt; active ingredient in products in Table 10.