

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

Herbicide	Toxicity ¹ LD ₅₀ mg/kg		Water Solubility (ppm at 25°C)	Adsorptivity to Soil	Soil Persistence at Standard Rate (months)	Runoff/ ² Leaching Potential	Restricted ³ Entry Interval
	Oral	Dermal					
Accent Q	>5000	>2000	70 (pH 7.0)	weak-moderate	1-10	3/1	4 hrs
Affinity BroadSpec	>5000	>2000	*	*	0.5	2/2	12 hrs
Aim	>5000	>5000	22	strong	-	-/-	12 hrs
Armezon/Impact	>2000	>4000	15,000 ppm@20° C	moderate	1-8	-/-	12 hrs
Assure II/Targa	4100-5900	>2000	<1	moderate	0.5	1/2	12 hrs
Atrazine	1075-4346	>3100	33	strong	2-8	2/1	12 hrs
Authority XL	1750	>5000	-	strong	2-10	2/1	12 hrs
Balance Flexx	>2000	>2000	6.8	strong	-	-/-	12 hrs
Banvel/Clarity	2629-3512	>2000	4500	weak	1-6	3/1	24 hrs
Basagran	2063	>10,000	500	weak	0.5	3/1	4-8 hrs
Basis Blend	>5000	>2000	-	-	-	-/-	4 hrs
Beacon	>5050	>2010	18,000 (pH 7.2)	weak	1-5	2/1	12 hrs
Betamix	4059	>1980	1	moderate	1	1/3	24 hrs
Betanex	3960	>9900	7	moderate	1	1/3	24 hrs
Buctril/Moxy	780	2000	50	moderate	0.5	2/3	12 hrs
Cadet	>5050	>2000	850	strong	-	-	12 hrs
Callisto	>5000	>5000	-	-	-	-	12 hrs
Canopy/Canopy Blend	>5000	>5000	300	strong	1-10	2/1	12 hrs
Canopy EX	>5000	>2000	286	strong	1-10	2/1	12 hrs
Capreno	>2000	>2000	-	-	-	-	12 hrs
Classic	>5000	>2000	300	strong	1-10	2/1	12 hrs
Cobra	2400-2600	>2000	0.1	strong	0.5	2/3	12 hrs
Command	2084-5000	2000-5000	1100	v. strong	3-6	2/2	12 hrs
2,4-D	375-1492	>2000	900	weak	1	2/2	12-48 hrs
2,4-DB	>1706	2000	insoluble	weak	1	2/3	48 hrs
Define	1365	5000	56	moderate	-	-	12 hrs
Reglone	600-810	260-315	infinite	v. strong	-	1/3	24 hrs
Dual II Magnum/ Cinch/Parallel	2672-2952	>2020	530	strong	1-3	2/1	24 hrs
Eptam	1325-5000	1500-5000	370	strong	1.5-2	2/3	12 hrs
Express	>5000	>2000	286	-	0.5	2/2	12 hrs
FirstRate	>5000	>2000	184	moderate	1-4	-/-	12 hrs
Fusion	3154	>2000	2 to 0.9	moderate	0.5	1/3	24 hrs
glyphosate**	>5000	>5000	900,000 (pH 7.0)	v. strong	1	1/3	SL
Gramoxone SL 2.0	310	>2000	infinite	v. strong	1	1/3	24 hrs
Harmony Extra	>5000	>2000	*	*	0.5	2/2	12 hrs
Harmony	>5000	>2000	2400	-	0.25	2/2	4 hrs
Harness	1249-2948	4166-5000	223	moderate	1-2	2/2	12 hrs
Hornet WDG	>5000	>5000	-	-	-	3/1	48 hrs
Kerb	>5000	>2000	15	strong	2-9	2/1	24 hrs
Laudis	1750	5000	-	-	-	1/1	12 hrs
Liberty	2119-2030	1390-5319	-	-	-	-/-	12 hrs
Lorox	3600-4833	>2000	75	v. strong	2-4	1/2	24 hrs
Matrix	>5000	>2000	-	-	-	-/-	4 hrs
MCPA	800	1500	insoluble	v. weak	1-4	1/3	48 hrs
Metribuzin	1500-2794	>5000	1200	moderate	2-4	2/1	12 hrs
Nortron SC	>2100	>4100	110	strong	1-4	2/2	12 hrs
Optill	>2000	>2000	-	weak	2-8	-	12 hrs
Osprey	>2000	>2000	-	-	-	-/-	4 hrs

See legend on page 178.

(Continued on next page)

TABLE 13 – Toxicity, Solubility, Adsorptivity and Persistence of Herbicides (continued)

Herbicide	Toxicity ¹ LD ₅₀ mg/kg		Water Solubility (ppm at 25°C)	Adsorptivity to Soil	Soil Persistence at Standard Rate (months)	Runoff/ ² Leaching Potential	Restricted ³ Entry Interval
	Oral	Dermal					
Outlook	695	>2000	1174	moderate	1–2	2/2	12 hrs
Permit	1287	>5000	15	–	–	2/2	12 hrs
Poast	2200–4100	2000–5000	48	moderate	0.25	2/3	12 hrs
Princep/Prowl/ Prowl H ₂ O	>5000 3956	2000–2500 >2200	5 <1	strong v. strong	2–8 3–6	2/1 1/3	12 hrs 24 hrs
Pursuit	3506–5000	>2000	1,400	weak	2–8	1/1	12–24 hrs
Python	>5000	>2000	49	moderate	2–8	3/1	12 hrs
Raptor	>5000	>4000	–	weak	1–2	–/–	4 hrs
Require Q	1611	>2000	–	–	–	–	4 hrs
Reflex/Flexstar	3683–8160	>1000	600,000	weak	6	2/1	24 hrs
Resolve	>5000	>2000	–	–	–	–/–	4 hrs
Resolve Q	1611	>2000	–	–	–	1/1	24 hrs
Resource	3200–4100	>2000	.189	strong	–	3/2	12 hrs
Ro-Neet	3160–3690	>4640	85	strong	1–3	2/2	12 hrs
Select/Arrow	2920–3610	>5000	infinite	moderate	0.25	3/3	24 hrs
Sharpen	>2000	>5000	2100	weak	0.5	–	12 hrs
Sinbar	5000–7500	>5000	710	moderate	5–6	2/1	12 hrs
Sonalan	3300–5000	>5000	1	v. strong	3–5	1/3	24 hrs
Spartan	2416	>5000	110	moderate	2–8	–/–	12 hrs
Steadfast Q	>5000	>2000	–	–	–	–	4 hrs
Stinger	>5000	>5000	1000	moderate	1–10	3/1	12 hrs
Surpass NXT	1249–2948	4165–5000	223	moderate	1–2	2/2	12 hrs
Synchrony XP	>5000	>2000	300	strong	1–10	2/1	12 hrs
Trifluralin	3738	>2000	<1	v. strong	3–6	1/3	12 hrs
Ultra Blazer	4790	3250	infinite	strong	1	2/2	48 hrs
Upbeet	>5000	>2000	110 (pH 7.0)	weak	–	–/–	4 hrs
Valor/Rowel	>5000	>2000	1.78	–	–	–	12 hrs
Velpar	1100–4120	>5000	33,000	strong	4–6	2/1	24 hrs
Verdict	>2000	>5000	–	moderate	1–2	2/2	12 hrs
Vida	>5000	>2000	–	–	–	–	12 hrs
Warrant	>5000	>5000	223	moderate	1–2	2/2	12 hrs
WideMatch	>5000	>5000	1000	moderate	1–10	3/1	12 hrs
Zidua	>2000	>2000	3.49 @ 20° C	weak	1–2	–/–	12 hrs
(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.

³ Read and follow label directions. Post areas or give oral warnings that areas have been treated to warn workers not to enter until the REI has elapsed as required by the label. SL=See Label.

* Combination of *Express* and the active ingredient in *Harmony*.

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