

# Weights & Measures Quick Reference Sheet

## LIQUID

1 imp. gallon = 4.55 litres (l or L)

1 litre = 0.8799 imp. quarts = 1.057 U.S. quarts

1 litre (l or L) = 0.22 imp. gallons (gal.) = 0.26 U.S. gallons

1 g/litre (l or L) = 0.035 oz./L (500 g/L = 18 oz./L)

## DRY

1 pound (lb.) = 0.454 kilograms (kg)

1 kilogram (kg) = 2.2 pounds (lbs.)

## QUANTITY PER AREA

1 litre per hectare (L/ha) = 0.089 gallons/acre (gal./ac or g.p.a.)

1 kilogram per hectare (kg/ha) = 0.89 pounds/acre (lbs./ac)

1 gram per hectare (g/ha) = 0.014 ounces/acre (oz./ac)

1 gallon per acre (gal./ac or g.p.a.) = 11.23 litres per hectare (L/ha)

1 pound per acre (lbs./ac) = 1.12 kilograms per hectare (kg/ha)

1 ounce per acre (oz./ac) = 70 grams per hectare (g/ha)

## AREA

1 hectare (ha) = 2.471 acres (ac)

1 acre (ac) = 0.405 hectares (ha)

## PRESSURE

1 kilopascal (kPa) = 0.14 pounds per square inch (p.s.i.)

1 pound per square inch (p.s.i.) = 6.9 kilopascals (kPa)

## CONVERSIONS AND FORMULAS

1 gallon per acre (gal./ac or g.p.a.) = 3.79 litres per acre (L/ac) = 9.35 litres per hectare

Degrees Fahrenheit (°F) = 32 + 5/9 degrees Celsius (°C)

## SIMPLE SPRAYER CALIBRATION

$$\frac{\text{Total gallons used} \times 43,560 \text{ ft.}}{\text{boom width (ft.)} \times \text{distance traveled (ft.)}} = \text{gallons per acre (g.p.a. or GPA)}$$

# Active Glossary

Active	Group #	Products containing active
bromoxynil	6	Pardner, Brotex, Koril 235, Bromotril
bromoxynil and 2,4-D ester	6,4	Thumper, Leader, Approve, Thrasher
bromoxynil and MCPA ester	6,4	Buctril M, Logic M, Mextrol 450, Badge, Benchmark (B)
carfentrazone	14	Cleanstart
clethodim	1	Select, Centurion, Arrow, Shadow
clodinafop-methyl 240 g/L+ Score	1	Horizon, Signal, Foothills, Harmony,
clodinafop-methyl NG 60 g/L	1	Horizon NG, NextStep NG
clodinafop-methyl 128 g/L	1	Harmony Grass
clopyralid	4	Lontrel, Curtail M, Eclipse II, Absolute, Prestige, Spectrum
fenoxaprop wheat & barley	1	Puma 120 Super, Cordon, Wildcat
florasulam	2	Frontline (A), Benchmark (A), Broadband, Stellar (A), PrePass (A), Spectrum
flucarbazone	2	Everst, Sierra, Pace, Pre-Pare Complete
fluroxypyr	4	Starane, Attain (A), Prestige (A), Harmony Max, Baseline (B), Pulsar, Stellar(A), Trophy, Everet GBX, Perimeter, Floruox-24
pinoxaden	1	Axial, Broadband
pyrasulfotole	27	Infinity, Velocity M3
thifensulfuron-methyl	2	Refine SG, Harmony, Deploy, Triton C
tralkoxydim + turbocharge	1	Liquid Achieve, Baseline (A), Titanium

# Glyphosate Mixing

<b>Supplier statement regarding the mixing of glyphosate products</b>	
<p><b>IPCO - Factor 540</b> 540 g/L a.i. concentration Potassium Salt (K+)</p>	<ul style="list-style-type: none"> <li>• Do not let raw products contact each other.</li> </ul> <p>EXPLANATION:</p> <ul style="list-style-type: none"> <li>• When tank-mixing older formulation glyphosates (like 356 g/L Factor) with new Factor 540, the two different formulations (IPA and K+) can be tank-mixed, BUT the two concentrated products should NEVER come in direct contact with each other.</li> <li>• MCPA Amine and 2,4-D Amine coming into contact with concentrated Factor 540 (or any other 540 g/L K+ formulation), will cause a precipitate ranging from a gel-like material to white crystals forming.</li> <li>• TANK MIXING PROCEDURE: The following steps should be followed when adding tank mix partners, using a herbicide loading system or adding product directly into the tank:               <ol style="list-style-type: none"> <li>1. Fill spray tank 3/4 full of water.</li> <li>2. Start agitation and run for entire mixing and spraying operation.</li> <li>3. Add required amount of the tank mix partner.</li> <li>4. Flush herbicide loading tank and herbicide containers with water.</li> <li>5. If using a herbicide loading system - ensure that the loading tank and lines to the pump are empty and flushed out with water before adding tank mix partner.</li> <li>6. Add required amount of IPCO Factor 540 Liquid Herbicide.</li> <li>7. Flush herbicide loading tank and herbicide containers with water.</li> <li>8. If using a herbicide loading system - ensure that the loading tank and lines to the pump are flushed with water and empty before starting spray operation.</li> </ol> </li> </ul> <p>Always start and end the mixing and spraying operation with a clean system.</p> <ul style="list-style-type: none"> <li>• Tank-mixing Factor 540 g/L with any concentration of 2,4-D Amine formulations requires a minimum water volume of 33 L/ac. Lower water volumes increase risk of precipitate forming.</li> </ul>
<p><b>Monsanto</b> Roundup WeatherMax, Roundup Transorb HC, R/T 540 540 g/ L a.i. concentration Potassium Salt (K+)</p>	<ul style="list-style-type: none"> <li>• NOT RECOMMENDED</li> </ul>
<p><b>Dow AgroSciences</b> Vantage Plus MAX II 480 g/L a.i. concentration Isopropyl Amine Salt (IPA)</p>	<ul style="list-style-type: none"> <li>• Both PrePass (360 g/L) and Vantage Plus MAX (460 g/L) contain IPA salt formulation. Adding VP MAX to PrePass has no concerns</li> <li>• Mixing with other formulations: NOT RECOMMENDED</li> </ul> <p>EXPLANATION:</p> <ul style="list-style-type: none"> <li>• Dow does not recommend tank-mixing any Roundup brand products with their IPA formulation glyphosates. The more highly ionic K+ salt formulations may form a precipitate crystal if mixed with Dow salt formulations.</li> </ul>
<p><b>Syngenta</b> Touchdown Total 500 g/L potassium salt (K+) to adding glyphosate products.</p>	<ul style="list-style-type: none"> <li>• Do not let raw products contact each other.</li> </ul> <p>EXPLANATION</p> <ul style="list-style-type: none"> <li>• When mixing Touchdown iQ with other glyphosates, do not allow concentrated glyphosates to come into contact with each other. Ensure there is water in the tank prior</li> <li>• Crystals may still form, but may not be noticeable since the crystals are water soluble.</li> </ul>

# 2,4-D or MCPA Formulation

Formulation	Rates	ounces of active ingredient per acre							
		1 oz.	2 oz.	3 oz.	4 oz.	5 oz.	6 oz.	7oz.	8oz.
<b>500</b>									
500 g ai/litre	mL/ac	56	111	167	222	278	333	389	444
= 18 oz/L	ac/10 L jug	180	90	60	45	36	30	26	23
<b>600</b>									
560 g ai/litre	mL/ac	50	100	150	200	250	300	350	400
= 20 oz./L	ac/10 L jug	200	100	67	50	40	33	29	25
<b>700</b>									
660 g ai/litre	mL/ac	43	87	130	174	217	260	304	347
= 23 oz/L	ac/10 L jug	230	115	77	58	46	38	33	29

## NOTES

# Glyphosate Comparison

	Jug Size	Active Ingredient Concentration g/L	Application Rate (L/ac)	1 L/ac REL		Acres Treated per Jug
				Acres Treated per Jug	Application Rate (L/ac)	
Polaris	10 L	360	0.5	20	1	10
Credit, NuGlo	10 L	450	0.4	24	0.81	12
Vantage Plus Max II & Maverick III, Matrix	10 L	480	0.38	26	0.76	13
Touchdown TOTAL, Traxion	10 L	500	0.36	28	0.73	14.0
Roundup Weathermax, Transorb HC and R/T 540, and Factor 540	10 L	540	0.33	30	0.67	15

## NOTES

# DO NOT FREEZE THESE PRODUCTS:

## HERBICIDES

2,4-D Amine 600  
Absolute  
Achieve Liquid Gold  
Amitrol 240  
Assert 300SC  
Assert FL  
Assure II  
Atrazine 480F  
Attain  
Attain XC  
Axial  
Axial Frontline XL Megapak  
Axial FX  
Axial iPak  
Baseline  
Banvel  
Benchmark  
Bengal  
Betamix B  
Brigade  
Broadband  
Brotex 240  
Bonanza 400EC  
Clovitox Plus  
Curtail M  
Eclipse II & III  
Equinox  
Everest GBX  
Everest 70DF  
Everest PP  
Everest Smart Boys  
Fencerow  
FlaxMax DLX  
FlaxMax Ultra  
Frontline XL  
Frontline 2,4-D  
Fusion  
Gramoxone  
Grazon  
Heat WG  
Hoe-grass 284  
Hyvar XL  
Infinity  
Infinity iPak  
Kerb 50-WSP

Leader  
Liberty 200SN  
Liberty  
Liquid Achieve (with Turbocharge)  
Logic M  
Lontrel 360  
Lorox L  
MCPA Amine 500  
MCPA K 400  
MCPA Na 500  
Mecaprop  
Muster Gold II  
Norton S.C.  
Odyssey / Odyssey DLX  
Option Liquid  
Perimeter  
Premium 2-way XP  
Premium 3-way XP  
PrePass  
Prestige  
Prestige XC  
Prevail  
Pulsar  
Puma Advance  
Puma120 Super  
Pursuit  
Pursuit Ultra  
Rival 500EC  
Rustler  
Sencor Solupak  
(container may crack if dropped)  
Solo  
Spectrum  
Stellar  
Target  
Tensile  
Tracker XP  
Titanium  
Treflan EC  
Trophy  
Tropotox Plus  
Velocity M3  
Vigil  
Viper  
Weedaway 2, 4-D Armine 600

## INSECTICIDES

Ambush  
Citadel 480 EC  
Cygon 480  
Decis 5EC

## SEED TREATMENTS AND FUNGICIDES

Allegiance  
Allegiance FL  
Apron Max RFC  
Apron Maxx RTA  
Charter  
Crown  
Cruiser 5FS  
Cruiser 350FS  
Cruiser Maxx Beans  
Cruiser Maxx Cereals  
Dividend XL RTA  
Folicur  
Gaucho  
Pivot  
Proline  
Raxil FL  
Raxil T  
Reason SC Fungicide  
Ronilan EG  
Rovral Flo / Rovral RX  
Scala SC  
Stratego

## OTHER

Assist  
Merge  
Think Purity  
Score