

CROPLIFE AUSTRALIA FUNGICIDE RESISTANCE MANAGEMENT REVIEW GROUP
Fungicide Activity Group Table (valid as at 27 June 2013)

FRAC Code	Fungicide Mode of Action Group	Chemical Family	Active Constituent	Trade Name* (Product name)
1	Methyl Benzimidazole Carbamates	Benzimidazole	carbendazim	various
			thiabendazole	various e.g. Tecto®
		Thiophanates	thiophanate-methyl	various e.g. Banrot®
2	Dicarboximide	Dicarboximide	iprodione	various e.g. Rovral®
			procymidone	various e.g. Sumisclex®
3	DMI	Imidazole	imazalil	various e.g. Fungaflo®
			prochloraz	various e.g. Octave®
		Piperazine	triforine	various e.g. Sapro®
		Pyrimidine	fenarimol	Rubigan®
		Triazole	bitertanol	Baycor®
			cyproconazole	Alto®
			difenoconazole	various e.g. Score®, Dividend®
			epoxiconazole	various e.g. Opus®
			fenbuconazole	Indar®
			fluquinconazole	various e.g. Jockey®
			flusilazole	various e.g. Nustar®
			flutriafol	various e.g. Armour®
			hexaconazole	various
			myclobutanil	various e.g. Systhane®
			penconazole	Topas®
			propiconazole	various e.g. Tilt®
			prothioconazole	Redigo®
			tebuconazole	various e.g. Raxil®, Folicur®
			tetraconazole	Domark®
			triadimefon	various e.g. Bayleton®
triadimenol	various e.g. Bayfidan®, Baytan®			
triticonazole	various e.g. Premis®			
4	Phenylamide	Acylalanine	benalaxyl (+ mancozeb)	Galben®M
			furalaxyl	Fongarid®
			metalaxyl	various e.g. Ridomil®, Apron®
			metalaxyl-m	various e.g. Ridomil® Gold, Apron XL®
		Oxazolidinone	oxadixyl (+ propineb)	Rebound®

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CropLife Australia Limited

Locked Bag 916, Canberra ACT 2601

Phone: 02 6230 6399 Email: info@croplifeaustralia.org.au Fax: 02 6230 6355 Website: www.croplifeaustralia.org.au

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5	Amines (Morpholines)	Spiroketalamine	spiroxamine	Prosper®
7	Carboxamides	Oxathiin carboxamides	carboxin	various e.g. Vitavax® ,
			oxycarboxin	Plantvax®
		Phenyl benzamides	flutolanil	Monstar®
		Pyridine carboxamides	boscalid	Filan®
		Pyrazole carboxamide	Penthiopyrad	Fontelis®
			Sedaxane	Vibrance®
			Penflufen	EverGol® Prime
Pyridinyl-ethyl-benzamides	Fluopyram	Luna® Privilege, Luna® Sensation		
8	Hydroxy-(2-amino-) pyrimidine	Hydroxy-(2-amino-) pyrimidine	bupirimate	Nimrod®
9	Anilinopyrimidine	Anilinopyrimidine	cyprodinil	Chorus®
			pyrimethanil	various e.g. Scala®
11	Quinone outside Inhibitors (Qols)	Methoxy acrylate	azoxystrobin	various e.g. Amistar® , Dynasty®
		Oximino acetates	kresoxim-methyl	Stroby®
			trifloxystrobin	Flint®
Methoxy carbamate	pyraclostrobin	Cabrio®		
12	Phenylpyrroles	Phenylpyrroles	fludioxonil	Maxim®
13	Quinolines	Quinolines	quinoxifen	Legend®
		Quinazolinone	Proquinozid	Talendo®
14	(Aromatic Hydrocarbons) (chlorophenyls, nitroanilines)	Aromatic hydrocarbons	quintozene	various e.g. Terraclor®
			tolclofos-methyl	various e.g. Rizolex®
	Heteroaromatics	1,2,4-thiadiazole	etridiazole	Terrazole®
17	Hydroxyanilide	Hydroxyanilide	fenhexamid	Teldor®
		Amino-pyrazolinone	Fenpyrazamine	Prolectus®
20	Phenylureas	Phenylureas	pencycuron	Monceren®
28	Carbamate	Carbamate	iodocarb	various
			propamocarb	Previcur®
29	Unspecified	2,6-dinitro-anilines	fluazinam	various e.g. Shirlan®
33	Phosphonates	Ethyl phosphonate	fosetyl-aluminium	Aliette®
			phosphorous acid	various e.g. Foli-R-Fos®
40	Carboxylic acid amides	Cinnamic acid derivative	dimethomorph	Acrobat®
45	Qxl	Triazolo-pyrimidylamine	Ametoctradin	Zampro®

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FRAC Code	Fungicide Mode of Action Group	Chemical Family	Active Constituent	Trade Name (Product name)
M	<i>Multi-site activity</i>	<i>Inorganic</i>	chlorine dioxide	Vibrex®
			hydrogen peroxide + peroxyacetic acid	Peratec®
			iodine	<i>various</i>
			mercury	Shirtan®
			sodium metabisulphite	Osku-vid®
		<i>Hydroxyquinoline</i>	8-hydroxyquinoline	Staehler Grafting Wax
M1	<i>Multi-site activity</i>	<i>Inorganic</i>	copper cuprous oxide	<i>various</i>
			copper hydroxide	<i>various e.g. Kocide®</i>
			copper oxychloride	<i>various e.g. Oxydul®</i>
			copper ammonium acetate	Liquicop®
			tribasic copper sulphate	Tri-base Blue®
			copper octanoate	Tricop®
M2	<i>Multi-site activity</i>	<i>Inorganic</i>	sulphur	<i>various e.g. Thiovit®, Kumulus®</i>
			potassium bicarbonate	Ecocarb®
			calcium polysulfide	Miller Lime Sulfur Solution Fungicide Insecticide®
M3	<i>Multi-site activity</i>	<i>Dithiocarbamate</i>	mancozeb	<i>various e.g. Dithane®</i>
			metiram	Polyram®
			thiram	<i>various e.g. Thiram</i>
			propineb	<i>various e.g. Antracol®</i>
			zineb	Zineb
			ziram	<i>various e.g. Ziram</i>
M4	<i>Multi-site activity</i>	<i>Phthalimide</i>	captan	<i>various e.g. Captan</i>
M5	<i>Multi-site activity</i>	<i>Chloronitriles</i>	chlorothalonil	<i>various e.g. Bravo®</i>
M6	<i>Multi-site activity</i>	<i>Sulfamide</i>	tolyfluanid	Euparen Multi®
M7	<i>Multi-site activity</i>	<i>Guanidine</i>	guazatine	<i>various e.g. Panoctine®</i>
M9	<i>Multi-site activity</i>	<i>Quinone (anthraquinone)</i>	dithianon	<i>various e.g. Delan®</i>
U1	<i>Unknown</i>	<i>Potassium salts of fatty acids</i>	Potassium salts of fatty acids	EcoProtector®
U6	<i>Unknown</i>	<i>Phenyl-acetamide</i>	Cyflufenamid	Flute®
U8	<i>Actin disruption</i>	<i>Benzophenone</i>	Metrafenone	Vivando®
U12	<i>Cell Membrane Disruption (proposed)</i>	<i>Guanidine</i>	Dodine	Syllit®

- Notes:
- The table does not include active constituents that have not yet been assigned an activity group by CropLife Australia.
 - Some products are mixtures of fungicides from different activity groups. These appear only once in the table.
 - If multiple trade names exist, the trade name entry is listed as *various* and the first registered trade name included.
- ® Registered trademark

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