

# **FUNGICIDE ACTIVITY GROUP TABLE**

FRAC Code	Fungicide Mode of Action Group	Chemical Family	Active Constituent	Trade name (Product name)
1	MBC - fungicides	benzimidazoles	carbendazim	various
	(methyl		thiabendazole	various e.g. Tecto®
	benzimidazole carbamates)	thiophanates	thiophanate-methyl	various e.g. Banrot®
2	Dicarboximide	dicarboximides	iprodione	various e.g. Rovral®
			procymidone	various e.g. Sumisclex®
		imidazoles	imazalil	various e.g. Fungaflor
			prochloraz	various e.g. Octave®
		piperazines	triforine	various e.g. Saprol®
			bitertanol	various e.g. Baycor®
			cyproconazole	various e.g. Alto®
			difenoconazole	various e.g. Score®
			epoxiconazole	various e.g. Opus®
			fluquinconazole	various e.g. Jockey®
			flusilazole	various e.g. Nustar®
	DMI funcicidos		flutriafol	various e.g. Armour®
	DMI - fungicides (demethylation		hexaconazole	various
3	inhibitors) (SB I: Class 1)	triazoles	ipconazole	Rancona®
			mefentrifluconazole	Belanty®
			myclobutanil	various e.g. Systhane®
			penconazole	various e.g. Topas®
			propiconazole	various e.g. Tilt®
			tebuconazole	various e.g. Folicur®, Raxil®
			triadimefon	various e.g. Bayleton®
			triadimenol	various e.g. Bayfidan®, Baytan®
			triticonazole	various e.g. Premis®
		triazolinthiones	prothioconazole	various e.g. Prosaro®
4	PA - fungicides (phenylamides)	acylalanines	benalaxyl (+ mancozeb)	Galben®M
			furalaxyl	various e.g. Fongarid®
			metalaxyl	various e.g. Apron®, Ridomil®
			metalaxyl-M	various e.g. Ridomil®
			(=mefenoxam)	Gold, Apron XL®
		oxazolidinones	oxadixyl (+propineb)	Rebound®
_	Amines	piperidines	fenpropidin	Seeker Duo
5	("morpholines") (SBI: Class II)	spiroketal-amines	spiroxamine	various e.g. Prosper®

## Please note



FRAC	Fungicide Mode of	Chamber I Family	A - 1' C 1' 1	Trade name
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		N-methoxy- (phenyl- ethyl)- pyrazole- carboxamides	pydiflumetofen	Miravis®, Saltro®
		oxathiin-	carboxin	various e.g. Vitavax®
		carboxamides	oxycarboxin	Plantvax®
		phenyl- benzamides	flutolanil	Monstar®, Moncut®
		pyridine- carboxamides	boscalid	various e.g. Filan®
	SDHI – fungicides		bixafen	Aviator® Xpro®
7	(succinate		benzovindiflupyr	Elatus®
	dehydrogenase inhibitors)	annonale 4	fluxapyroxad	Merivon®, Sercadis®, Systiva®
		pyrazole -4- carboxamides	inpyrfluxam	Excalia®
		Carboxarriides	isopyrazam	Seguris®
			penflufen	EverGol® Prime
			penthiopyrad	Fontelis®
			sedaxane	Vibrance®
		phenyl-oxo-ethyl thiophene amide	isofetamid	Kenja®
		pyridinyl-ethyl- benzamides	fluopyram	llevo®,
				Luna®
8	Hydroxy-(2-amino-) pyrimidine	hydroxy-(2-amino- ) pyrimidines	bupirimate	Nimrod®
9	AP - fungicides (anilino-pyrimidines)	anilino- pyrimidines	cyprodinil	various e.g. Chorus®
			pyrimethanil	various e.g. Scala®
	Qol - fungicides (quinone outside inhibitors)	methoxy- acrylate	azoxystrobin	various e.g. Amistar®, Dynasty®
		oximino-acetates	kresoxim-methyl	various e.g. Stroby®
11			trifloxystrobin	various e.g. Flint®
		methoxy- carbamates	pyraclostrobin	various e.g. Cabrio®
		methoxy- acetamide	mandestrobin	Intuity®
12	PP - fungicides (phenylpyrroles)	phenylpyrroles	fludioxonil	various e.g. Maxim®
13	Aza-naphthalenes	aryloxyquinoline	quinoxyfen	Legend®
13	Aza-Haphullalenes	quinazolinone	proquinazid	Talendo®
14	AH - fungicides	aromatic hydrocarbons	quintozene (PCNP)	various e.g. Terraclor®
	(aromatic hydrocarbons)		tolclofos-methyl	various e.g Rizolex®



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	(chlorophenyls, nitroanilines)			
	Heteroaromatics	1,2,4-thiadiazoles	etridiazole	various e.g. Terrazole®
	KRI - fungicides (keto	hydroxyanilides	fenhexamid	various e.g. Teldor®
17	reductase inhibitors) (SBI: Class III)	amino- pyrazolinone	fenpyrazamine	Prolectus®
19	Polyoxins	peptidyl pyrimidine nucleoside	polyoxin D	Intervene ®
20	Phenylureas	phenylureas	pencycuron	Monceren®
		cyano-imidazole	cyazofamid	RanMan®
21	Qil - fungicides (quinone inside	sulfamoyl-triazole	amisulbrom	Amishield®
21	inhibitors)	picolinamides	florylpicoxamid	various eg: Telbek <sup>®</sup> , Verpixo <sup>®</sup>
28	Coulousates	carbamates	iodocarb	various
20	Carbamates	Carbaniates	propamocarb	various e.g. Previcur®
29	Uncouplers of oxidative phosphorylation	2,6-dinitro-anilines	fluazinam	various e.g. Shirlan®
40	CAA - fungicides (carboxylic acid amides)	cinnamic acid amides	dimethomorph	various e.g. Acrobat®
		mandelic acid amides	mandipropamid	Revus®
43	Benzamides	pyridinylmethyl- benzamides	fluopicolide	Infinito®
45	QoSI - fungicides (quinone outside inhibitor, stigmatellin binding type)	triazolo- pyrimidylamine	ametoctradin	Zampro®
49	OSBPI-fungicides oxysterol binding protein	piperidinyl- thiazole-	oxathiapiprolin	Orondis®, Zorvec® Enicade®
	homologue inhibition	isoxazolines	fluoxapiprolin	Xivana® Prime
50	Actin disruption aryl- phenyl-ketones	benzophenone	metrafenone	Vivando®
		benzoylpyridine	pyriofenone	Kusabi®
52	DHODHI-fungicides (dihydroorotate dehydrogenase inhibitor)	phenyl-propanol	ipflufenoquin	Migiwa <sup>®</sup>
М	Multi-site activity	inorganic	chlorine dioxide	Vibrex®



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			hydrogen peroxide + peroxyacetic acid	various e.g. Peratec®
			iodine	various
			mercury	Shirtan®
			sodium metabisulphite	Osku-vid®
		hydroxyquinoline	8-hydroxyquinoline	Staehler Grafting Wax
			copper cuprous oxide	various
			copper hydroxide	various e.g. Kocide®
	Multi-site activity		copper oxychloride	various e.g. Oxydul®
М1	inorganic (electrophiles)	inorganic	copper ammonium acetate	various e.g. Liquicop®
	(electrophiles)		tribasic copper sulphate	various e.g. Tri-base Blue®
			copper octanoate	Tricop®
			copper hydroxide	various e.g. Kocide®
	Multi-site activity inorganic (electrophiles)	inorganic	sulphur	various e.g. Thiovit®, Kumulus®
M2			potassium bicarbonate	various e.g. Ecocarb®
			calcium polysulfide	Miller Lime Sulfur Solution Fungicide Insecticide®
	Multi-site activity		mancozeb	various e.g. Dithane® Rainshield® Neo Tec® Fungicide®
	dithiocarbamate and relatives (electrophiles)	dithio-carbamates and relatives	metiram	Polyram®
М3			thiram	various e.g. Thiram®
			propineb	various e.g. Antracol®
			zineb	Zineb®
			ziram	various e.g. Ziram®
M4	Multi-site activity phthalimides (electrophiles)	phthalimides	captan	various e.g. Captan®
М5	Multi-site activity chloronitriles (phthalonitriles) (unspecified mechanism)	chloronitriles (phthalonitriles)	chlorothalonil	various e.g. Bravo®



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М6	Multi-site activity sulfamides (electrophiles)	sulfamides	tolylfluanid	Euparen Multi®
М7	Multi-site activity bisguanidine (membrane disruptors, detergents)	bis-guanidines	guazatine	various e.g. Panoctine®
М9	Multi-site activity quinones (anthraquinones) (electrophiles)	quinones (anthraquinones)	dithianon	various e.g. Delan®
BM01	Multi-site activity plant extract	polypeptide (lectin)	extract from the cotyledons of lupine plantlets ("BLAD")	ProBlad Plus fungicide®
		terpene hydrocarbons, terpene alcohols and terpene phenols	Extract from  Melaleuca alternifolia (tea tree) plant oils (mixtures): eugenol, geraniol, thymol	Timorex® Gold: Novellus Fungicide®
		Streptomyces sp.	Streptomyces lydicus strain WYEC108	Actinovate®
BM02	Multi-site activity microbial (living microbes or extract, metabolites)	<i>Bacillus</i> spp.	B.acillus amyloliquefaciens* strain QST 713  *synonyms for Bacillus amyloliquefaciens are Bacillus subtilis and B. subtilis var. amyloliquefaciens (previous taxonomic classification)	Serenade®
			Bacillus amyloliquefaciens* strain MBI600	Serifel®
		Trichoderma spp.	Trichoderma harzianum strain	VineVax®



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			AG1, AG2, AG3, AG5, AG8, AG11 & AG15	
			Trichoderma harzianum rifae isolate T-39	Trichodex® Bio- Fungicide
P01	Benzothiadiazole	Benzothiadiazole	Acibenzolar-S-methyl	Bion®
P03	Host plant defence inducer via systemic acquired resistance		isotianil	Routine® 200SC
P07			fosetyl-Al	various e.g. Aliette®
(33)	Phosphonates	ethyl phosphonate	phosphorous acid and salts	various e.g. Foli-R-Fos®
U1	Unknown	potassium salts of fatty acids	potassium salts of fatty acids	EcoProtector®
U6	Unknown phenyl- acetamide	phenyl-acetamide	cyflufenamid	Flute®
U12	Cell membrane disruption (proposed) guanidines	guanidines	dodine	Syllit®

## **Notes**

- The table does not include active constituents that have not yet been assigned an activity group by CropLife Australia.
- 2. Products with the same active constituent but different use patterns are also included in the table for example, seed treatments and foliar.
- 3. New active constituents and products can only be included in the activity group table once they are formally registered by the APVMA for commercial use.
- 4. Some products are mixtures of fungicides from different activity groups. These appear only once in the table.
- 5. If multiple trade names exist, the trade name entry is listed as various and the first registered trade name included.
- 6. ®Registered trademark.