

## famoxadone (Ref: JE 874)

\*\* DPX JE874 \*\* IN JE874 \*\* [Translations](#)

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## GENERAL INFORMATION

**Description:** A fungicide used to control a broad spectrum of plant pathogenic fungi including downy mildew and blights

**Introduction:** 1998

**EC Directive 91/414:**

Status	Annex 1
Dossier rapporteur/co-rapporteur	France
Date inclusion expires	30/09/2012

Approved for use (✓) or known to be used (#) in the following European countries:



AT BE BG CY CZ DE DK EE ES FI FR GR HU IE IT LT LU LV MT NL PL PT RO SE SI SK UK  
 ✓ ✓ ✓ ✓ ✓ ✓ ■ ✓ ✓ ✓ ✓ ✓ ✓ ■ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓


Also registered in: USA

**General status:**




Pesticide Type	Fungicide
Chemical Group	Oxazole
Mode of Action	Protectant with residual activity, interferes with plant respiratory system
CAS RN	131807-57-3
EC Number	-
CIPAC Number	594
US EPA Chemical code	113202
Chemical Formula	C <sub>22</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub>
SMILES	O=C2OC(C(=O)N2Nc1cccc1)(c4ccc(Oc3cccc3)cc4)C
International Chemical Identifier (InChI)	InChI=1/C22H18N2O4/c1-22(16-12-14-19(15-13-16)27-18-10-6-3-7-11-18)20(25)24(21(26)28-22)23-17-8-4-2-5-9/h2-15,23H,1H3
Structure diagram available?	<a href="#">Yes</a>

Molecular Mass (g mol <sup>-1</sup> )	374.39
IUPAC Name	( <i>RS</i> )-3-anilino-5-methyl-5-(4-phenoxyphenyl)-1,3-oxazolidine-2,4-dione
CAS Name	5-methyl-5-(4-phenoxyphenyl)-3-(phenylamino)-2,4-oxazolidinedione
Other status information	-
Herbicide Resistance (HRAC) Classification	Not applicable
Insecticide Resistance (IRAC) Classification	Not applicable
Fungicide Resistance (FRAC) Classification	11
Physical State	Pale cream powder


## Formulations:

Property 	Value
Example manufacturers of products using this active	<ul style="list-style-type: none"> <li>• DuPont</li> <li>• Syngenta</li> </ul>
Example products using this active	<ul style="list-style-type: none"> <li>• Medley</li> <li>• Tanos</li> <li>• Famoxate</li> </ul>
Associated substances	<ul style="list-style-type: none"> <li>• <a href="#">cymoxanil</a></li> <li>• <a href="#">flusilazole</a></li> <li>• <a href="#">mancozeb</a></li> </ul>
UK LERAP status	LERAP Category B
Formulation and application details	-

## ENVIRONMENTAL FATE

Property 	Value	Source/Quality Score/Other Information 	Interpretation 
Solubility - In water at 20°C (mg l <sup>-1</sup> )	0.11	A5	Low
Solubility - In organic solvents at 20°C (mg l <sup>-1</sup> )	274000	A5 - Acetone	-
	13300	A5 - Toluene	-
	48	A5 - Hexane	-

		125000	A5 - Ethyl acetate	-
Melting Point (°C)		141.8	A5	-
Boiling Point (°C)		-	-	-
Degradation point (°C)		-	-	-
Flashpoint (°C)		Not highly flammable	A5	-
Octanol-water partition coefficient at pH 7, 20°C	P:	6.31 X 10 <sup>04</sup>	Calculated	-
	Log P:	4.8	A5	High
Bulk density (g ml <sup>-1</sup> )/Specific gravity		1.31	A5	-
Dissociation constant (pKa) at 25°C		Not applicable Note: No dissociation	A5	-
Vapour pressure at 25°C (mPa)		0.00064	A5	Volatile
Henry's law constant at 25°C (Pa m <sup>3</sup> mol <sup>-1</sup> )		4.60 X 10 <sup>-03</sup>	A5	Non-volatile
Henry's law constant at 20°C (dimensionless)		8.86 X 10 <sup>-07</sup>	Q2	Moderately volatile
Soil degradation (days) (aerobic)	DT50 (typical):	6	A5	Non-persistent
	DT50 (lab at 20°C):	5.7	A5	Non-persistent
	DT50 (field):	20	F4	Non-persistent
	DT90 (lab at 20°C):	152	A5	-
	DT90 (field):	-	-	-
	Note:	EU dossier Lab studies DT50 range 2-20 days, DT90 range 56-248 days		
Aqueous photolysis DT50 (days) at pH 7	Value:	1.9	A5	Moderately fast
	Note:	-		
Aqueous hydrolysis DT50 (days) at 20°C and pH 7	Value:	2	A5	Non-persistent
	Note:	pH sensitive: DT50 41 days at pH 5, 1.5 hours at pH 9 all at 25 deg C		
Water-Sediment DT50 (days)		0.7	A5	Fast
Water phase only DT50 (days)		0.1	A5	Fast
GUS leaching potential index		0.33	Calculated	Low leachability
SCI-GROW groundwater index (µg l <sup>-1</sup> ) for a 1 kg ha <sup>-1</sup> or 1 l ha <sup>-1</sup> application rate	Value:	5.12 X 10 <sup>-03</sup>	Calculated	-
	Note:	-		

Potential for particle bound transport index 	-	Calculated	Medium
Koc - Organic-carbon sorption constant (ml g <sup>-1</sup> )	3740	L3	Slightly mobile
	pH sensitivity: None		
	Note: EU dossier Koc range 3300-4030 mL/g		
Freundlich isotherm	Kf: 1.23	A5	-
	<sup>1</sup> / <sub>n</sub> : 0.77		-
	Note: Mean of 3 soils. Speyer 2.3, OC=1.34% Kf=7.4; Sandy clay, OC=0.58% Kf=4.5; Speyer 2.2, OC=2.3% Kf=25.0		
Maximum UV-vis absorption L mol <sup>-1</sup> cm <sup>-1</sup>	[231nm = 553, shoulder at 275-280nm, no absorption after 290nm]	A5	-

### Key metabolites:

Metabolite	Formation Medium	Estimated Maximum Occurrence Fraction	91/414 Relevancy 
alpha-hydroxy-alpha-methyl-4-phenoxybenzene acetic acid (Ref: IN-JS940) 	Soil	0.111	Major fraction, Relevancy unknown
5-[4-(4-hydroxyphenoxy)phenyl-5-methyl-3-(phenylamino)-2,4-oxazolidine dione (Ref: IN-KZ007) 	Soil	0.162	Major fraction, Relevancy unknown

### Other known metabolites:

Metabolite name and reference	Aliases	Formation Medium / Rate	Estimated Maximum Occurrence Fraction
(Ref: IN-H3310)	-	Water (Hydrolysis)	0.120 @ pH7
(Ref: IN-H3310)	-	Water (Hydrolysis)	0.390
(Ref: IN-JL856)	-	Water (Hydrolysis)	0.140 @ pH7
(Ref: IN-MN968)	-	Water (Hydrolysis)	0.380 @ pH9

## ECOTOXICOLOGY




Property 	Value	Source/Quality Score/Other Information 	Interpretation 
Bio-concentration factor	BCF: 3000	A5	Threshold for concern

	CT50 (days):	Not available		-
Bioaccumulation potential		-	Calculated	High
Mammals - Acute oral LD50 (mg kg <sup>-1</sup> )		> 5000	A5 Rat	Low
Mammals - Short term dietary NOEL (mg kg <sup>-1</sup> ):		3.3	F4 Rat	High
	(ppm diet):	-		-
Birds - Acute LD50 (mg kg <sup>-1</sup> )		> 2250	A5 <i>Colinus virginianus</i>	Low
Birds - Short term dietary (LC50/LD50)		> 5620 mg/kg feed	A5 <i>Colinus virginianus</i>	-
Fish - Acute 96 hour LC50 (mg l <sup>-1</sup> )		0.011	A5 Salmonidae	High
Fish - Chronic 21 day NOEC (mg l <sup>-1</sup> )		0.0014	A5 <i>Oncorhynchus mykiss</i>	-
Aquatic invertebrates - Acute 48 hour EC50 (mg l <sup>-1</sup> )		0.012	A5 <i>Daphnia magna</i>	High
Aquatic invertebrates - Chronic 21 day NOEC (mg l <sup>-1</sup> )		0.0037	A5 <i>Daphnia magna</i>	-
Aquatic crustaceans - Acute 96 hour LC50 (mg l <sup>-1</sup> )		-	-	-
Sediment dwelling organisms - Acute 96 hour LC50 (mg l <sup>-1</sup> )		-	-	-
Sediment dwelling organisms - Chronic 28 day NOEC, static, water (mg l <sup>-1</sup> )		0.01	A5 <i>Chironomus riparius</i>	Moderate
Sediment dwelling organisms - Chronic 28 day NOEC, sediment (mg kg <sup>-1</sup> )		-	-	-
Aquatic plants - Acute 7 day EC50, biomass (mg l <sup>-1</sup> )		0.081	F3 <i>Lemna gibba</i>	Moderate
Algae - Acute 72 hour EC50, growth (mg l <sup>-1</sup> )		0.022	A5 <i>Raphidocelis subcapitata</i>	Moderate
Algae - Chronic 96 hour NOEC, growth (mg l <sup>-1</sup> )		-	-	-
Honeybees - Acute 48 hour LD50 (µg bee <sup>-1</sup> )		> 25	A5 Contact	Moderate
Earthworms - Acute 14 day LC50 (mg kg <sup>-1</sup> )		470	A5	Moderate
Earthworms - Chronic 14 day NOEC, reproduction (mg kg <sup>-1</sup> )		-	-	-
Other soil macro-organisms - e.g. Collembola	LR50 / EC50 / NOEC / % Effect	-	-	-
Other arthropod (1)	LR50 g ha <sup>-1</sup> :	-	-	-

	% Effect:	100	Mortality Dose: 0.3 kg ha <sup>-1</sup> A5 Aphidius rhopalosiphi, adult	Harmful
Other arthropod (2)	LR50 g ha <sup>-1</sup> :	-	-	-
	% Effect:	99	Mortality Dose: 0.099 kg ha <sup>-1</sup> A5 Typhlodromus pyri, protonymph	Harmful
Soil micro-organisms		Nitrogen mineralisation: No significant effect Carbon mineralisation: No significant effect	A5 [Dose: 1.44 mg ha <sup>-1</sup> soil]	-
Mesocosm study data	NOEAEC mg l <sup>-1</sup> :	-	-	-
	NOEAEC mg l <sup>-1</sup> :	-	-	-

## HUMAN HEALTH AND PROTECTION

### General:

Property 	Value	Source/Quality Score/Other Information 	Interpretation 
Mammals - Acute oral LD50 (mg kg <sup>-1</sup> )	> 5000	A5 Rat	Low
Mammals - Dermal LD50 (mg kg <sup>-1</sup> body weight)	> 2000	A5 Rat	-
Mammals - Inhalation LC50 (mg l <sup>-1</sup> )	5.3	A5 Rat	-
ADI - Acceptable Daily Intake (mg kg <sup>-1</sup> bw day <sup>-1</sup> )	0.012	A5	-
ARfD - Acute Reference Dose (mg kg <sup>-1</sup> bw day <sup>-1</sup> )	0.2	A5 Mice, SF=100	-
AOEL - Acceptable Operator Exposure Level - Systemic (mg kg <sup>-1</sup> bw day <sup>-1</sup> )	0.0048	A4 Dog, 1 year, SF=100	-
Dermal penetration studies (%)	0.3-15.8	A5 (Diluted spray-Conc)	-
Dangerous Substances Directive 76/464	-	-	-
Exposure Limits	-	-	-
Exposure Routes	Public:	[Minimal risk from dietary exposure], [Risk assessment indicates ARfD would not normally be exceeded]	

	Occupational:	[Risk of exposure acceptable under label recommendations for use for personal protection clothing and equipment]		
Examples of European MRLs (mg kg <sup>-1</sup> )	Value:	-		
	Note:	For the EU pesticides database <a href="#">click here</a>		
Drinking Water MAC (µg l <sup>-1</sup> )		-	-	-

### Health issues:

Carcinogen	Endocrine disrupter	Reproduction / development effects	Acetyl cholinesterase inhibitor	Neurotoxicant	Respiratory tract irritant	Skin irritant	Eye irritant
X	-	?	X	✓	-	✓	✓
General human health issues		[Liver toxicant]					

- ✓ : Yes, known to cause a problem  
 X : No, known not to cause a problem  
 ? : Possibly, status not identified  
 - : No data

### Handling issues:

Property	Value	Source/Quality Score/Other Information	Interpretation
General	[Not explosive or oxidising]		
EC Risk Classification	[Xn - Harmful: R48/22], [N - Dangerous for the environment: R50, R53]		
EC Safety Classification	S2, S46, S60, S61		
WHO Classification	U	-	Unlikely to present acute hazard in normal use
US EPA Classification (formulation)	III	-	Caution - Slightly toxic
UN Number	Usually 1648		
Waste disposal & packaging	[Usually Packaging Group II (medium danger)]		

### TRANSLATIONS

Language	Name
English	famoxadone
French	famoxadone
German	Famoxadone
Danish	famoxadon
Italian	famoxadone
Spanish	famoxadona

Greek	famoxadone
Slovenian	famoksadon
Polish	famoksadon
Swedish	famoxadon
Hungarian	famoxadon
Dutch	famoxadon

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