



**E N I G M A**  
MARKETING RESEARCH

# **A Decade of New Off-Patent/Generic Agrochemical Active Ingredients 2021 - 2030**

**A new report, the 11th in the series, on the market for off-patent/generic agrochemical active ingredients with patents expiring between 2021 and 2030.**

This report will help you to define new product development opportunities in the off-patent/generic agrochemical market over the next 10 years.

**In total 42, commercially important, active ingredients (a.is) are profiled in this report.**

# Report Outline

## Section 1: Identifying the next generation of off-patent agrochemical products

Since 2000, Enigma has identified over 230 a.is. with patents expiring between 2000 and 2020. This report profiles 42 a.is. losing patent protection in the next decade.

Section 1 assesses the key issues involved in post-patent defence strategies employed by the inventor company to protect against generic competition including:-

- Patent term extension - Supplementary Protection Certificates (SPCs)
- Novel formulation patents
- Mixture patents
- Synergistic mixture patents
- New use patents
- Process patents
- Marketing/license deals
- Registration requirements and data protection

## Section 2: Profiles of 42 active ingredients with patents expiring between 2021-2030.

**Key data for each active ingredient profiled includes:**

- Major markets
- Major crops
- Major mixture products
- European patent number and expiry date
- SPCs for the active ingredient
- SPCs for mixture products

## 42 active ingredients profiled in the report

Active Ingredient	Inventor Company	Activity
AFIDOPYROPEN	Meiji Seika Pharma	Insecticide
AMETOCTRADIN	BASF	Fungicide
AMINOPYRALID	Dow AgroSciences now Corteva	Herbicide
BENZOVINDIFLUPYR	Syngenta	Fungicide
BICYCLOPYRONE	Syngenta	Herbicide
BIXAFEN	Bayer CropScience	Fungicide
CHLORANTRANILIPROLE	DuPont now Corteva - FMC	Insecticide
CYANTRANILIPROLE	DuPont now Corteva - FMC	Insecticide
CYCLANILIPROLE	Ishihara Sangyo Kaisha (ISK)	Insecticide
CYFLUMETOFEN	Otsuka Chemical	Insecticide
EMAMECTIN BENZOATE	Syngenta	Insecticide
FENPICOXAMID	Dow AgroSciences now Corteva	Fungicide
FLORPYRAUXIFEN	Dow AgroSciences now Corteva	Herbicide
FLUOPYRAM	Bayer CropScience Nihon Nohyaku	Fungicide Nematicide
FLUPYRADIFURONE	Bayer CropScience	Insecticide
FLUXAMETAMIDE	Nissan Chemical Industries	Insecticide
FLUXAPYROXAD	BASF	Fungicide
HALAUXIFEN-METHYL	Dow AgroSciences now Corteva	Herbicide
INDAZIFLAM	Bayer CropScience	Herbicide
ISOFETAMID	Ishihara Sangyo Kaisha (ISK)	Fungicide

Active Ingredient	Inventor Company	Activity
ISOPYRAZAM	Syngenta	Fungicide
MANDESTROBIN	Shionogi & Co., Ltd. - Sumitomo Chemicals	Fungicide
MANDIPROPAMID	Syngenta	Fungicide
OXATHIPIPROLIN	DuPont now Corteva	Fungicide
PENFLUFEN	Bayer CropScience	Fungicide
PICARBUTRAZOX	Nippon Soda	Fungicide
PROPYRISULFURON	Sumitomo Chemical	Herbicide
PYDIFLUMETOFEN	Syngenta	Fungicide
PYFLUBUMIDE	Nihon Nohyaku	Acaricide
PYRASULFOTOLE	Bayer CropScience	Herbicide
PYRIOFENONE	Ishihara Sangyo Kaisha (ISK)	Fungicide
PYROXASULFONE	Kumiai Chemical Industry	Herbicide
PYROXSULAM	Dow AgroSciences now Corteva	Herbicide
SAFLUFENACIL	BASF	Herbicide
SEDAXANE	Syngenta	Fungicide
SULFOXAFLOL	Dow AgroSciences now Corteva	Insecticide
TETRANILIPROLE	Bayer CropScience	Insecticide
THIENCARBAZONE	Bayer CropScience	Herbicide
TIAFENACIL	Korea Research Institute of Chemical Technology and Dongbu Hitek	Herbicide
TIOXAZAFEN	Monsanto now Bayer CropScience	Nematicide
TOLYPYRALATE	ISK Biosciences (ISK)	Herbicide
TRIFLUMEZOPYRIM	DuPont now Corteva	Insecticide

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## **Definitions**

The Report – New Off-Patent/Generic Active Ingredients AND Mixture Products – Post 2019.

The Company – The Company as defined in the Purchase Order Contract.

# Purchase Order Contract

## New Off-Patent/Generic Active Ingredients 2021 - 2030

The purchase price for a Restricted Licence is	£3,850	*
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[nigel.uttley@enigmamarketingresearch.com](mailto:nigel.uttley@enigmamarketingresearch.com)

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Whilst every effort has been made to ensure that the patent information given herein is accurate, this report cannot be considered to be an exhaustive review of the patents status of the compound and no guarantee can be given as to its accuracy or completeness.

This report identifies those patents believed to be the basic product patents for the compound in question. However, it is possible that there may be other patents and patent applications, not identified in this report, relating to *inter alia* particular derivatives, salts, isomers, crystalline forms, uses, compositions and processes for the manufacture of the product, and which may be relevant to the commercialisation of the product.

Unless otherwise stated, the patent expiry dates given are projected expiry dates based on the filing dates (or where appropriate grant dates) of the patents, assuming that all of the annual renewal fees have been paid and assuming also that the patents have not been revoked or otherwise allowed to lapse. Moreover, in certain countries it is possible for the term of a patent relating to an agrochemical to be extended and, where we are aware of such extensions, they have been noted in this report. However, the absence of any mention of patent term extensions in this report should not be taken as an authoritative statement that no such extensions have been granted. We would strongly recommend that the official UK (or other country) patent office register be inspected to obtain final confirmation as to the current status or expiry dates of the patents.

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