



E N I G M A
MARKETING RESEARCH

New Off-Patent/Generic Active Ingredients AND Mixture Products - Post 2019

A new report, the 10th in the series, on the market for off-patent/generic agrochemical active ingredients and mixture products with patents expiring between **2019 and **2026**.**

Over the last 20 years there has been a decline in the discovery of new active ingredients (a.is.) but, at the same time, there has been a substantial increase in the number of mixture products entering the market. This report, our tenth in the series, not only looks at a.is. but also mixture products which will lose patent protection between 2019 and 2026.

In total 19 a.is. and 70 mixture products are profiled in this report.

The report addresses the issues facing the generic manufacturer when assessing which a.i.(s) affords the best opportunity.

Report Outline

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

Since 2000, Enigma has identified over 200 a.is. with patents expiring between 2000 and 2022. This is our tenth report and profiles 19 a.is. and 70 mixture products which will lose patent protection between 2019 and 2026. With so many products coming off patent, choosing the right off-patent/generic to develop requires in-depth analysis of key areas including:

- **The Marketing Environment**
- **Intellectual Property Rights**
- **Chemistry/Technology of Manufacture**
- **Registration Issues**

Intellectual Property Rights (IPR), in the form of patents and data protection for registrations, is fundamentally important to the dynamics of the agrochemical industry and dictates the market share balance between the R&D sector (innovator companies) and the generic sector.

Patent term extensions (SPCs), data protection, segmentation of the market through mixture products, marketing/licence deals and manufacturing know-how are discussed as strategies used by inventor companies to protect against generic competition.

Section 2: Profiles of 19 active ingredients and 70 mixture products with patents expiring between 2019-2026.

Key data for each active ingredient and mixture product profiled:

- Major markets
- Mixture products - typical crops and trade names
- Synthetic pathway for active ingredients
- European patent number and expiry date
- SPCs for the active ingredient
- SPCs for mixture products

19 active ingredients profiled in the report

BIXAFEN
CHLORANTRANILIPROLE
CYANTRANILIPROLE
CYPROSULFAMIDE
FENPYRAZAMINE
FLUBENDIAMIDE
FLUOPICOLIDE
FLUOPYRAM
FLUXAPYROXAD
ISOPYRAZAM
MANDIPROPAMID
PENFLUFEN
PENTHIOPYRAD
PINOXADEN
PYRIOFENONE
PYROXSULAM
SEDAXANE
THIENCARBAZONE-METHYL
VALIFENALATE

70 mixture products profiled in the report

BIXAFEN + FLUOXASTROBIN + PROTHIOCONAZOLE
BIXAFEN + PROTHIOCONAZOLE
BIXAFEN + PROTHIOCONAZOLE + SPIROXAMINE
BIXAFEN + PROTHIOCONAZOLE + TEBUCONAZOLE
BIXAFEN + TEBUCONAZOLE
CHLORANTRANILIPROLE + ABAMECTIN
CHLORANTRANILIPROLE + LAMBDA-CYHALOTHRIN
CHLORANTRANILIPROLE + THIAMETHOXAM
CYPROSULFAMIDE + FORAMSULFURON + IODOSULFURON-METHYL-SODIUM + THIENCARBAZONE-METHYL
CYPROSULFAMIDE + ISOXAFLUTOLE
CYPROSULFAMIDE + ISOXAFLUTOLE + THIENCARBAZONE-METHYL
CYPROSULFAMIDE + THIENCARBAZONE-METHYL + FORAMSULFURON
DITHIANON + PYRIMETHANIL
DITHIANON + MANDIPROPAMID
EPOXICONAZOLE + FENPROPIMORPH + METRAFENONE
EPOXICONAZOLE + METRAFENONE
EPOXICONAZOLE + ISOPYRAZAM
EPOXICONAZOLE + FLUXAPYROXAD + PYRACLOSTROBIN
FLORASULAM + CLODINAFOP-PROPARGYL + PINOXADEN
FLORASULAM + CLOQUINTOCET-MEXYL + PINOXADEN
FLORASULAM + PINOXADEN
FLORASULAM + TRITOSULFURON
FLUOPICOLIDE + FOSETYL-AL
FLUOPICOLIDE + PROPAMOCARB HYDROCHLORIDE
FLUOPICOLIDE + PROPINEB
FLUOPYRAM + FLUOXASTROBIN + PROTHIOCONAZOLE + TEBUCONAZOLE
FLUOPYRAM + FLUOXASTROBIN + TRIADIMENOL
FLUOPYRAM + PROTHIOCONAZOLE
FLUOPYRAM + PROTHIOCONAZOLE + TEBUCONAZOLE

Enigma Marketing Research

FLUOPYRAM + TEBUCONAZOLE
FLUOPYRAM + TRIADIMENOL
FLUOPYRAM + TRIFLOXYSTROBIN
FLUXAPYROXAD + CHLOROTHALONIL
FLUXAPYROXAD + EPOXICONAZOLE + PYRACLOSTROBIN
FLUXAPYROXAD + PYRACLOSTROBIN
ISOPYRAZAM + AZOXYSTROBIN
ISOPYRAZAM + CYPROCONAZOLE
ISOPYRAZAM + CYPRODINIL
ISOPYRAZAM + DIFENOCONAZOLE
ISOPYRAZAM + EPOXICONAZOLE
ISOPYRAZAM + PROTHIOCONAZOLE
MANDIPROPAMID + CHLOROTHALONIL
MANDIPROPAMID + CYMOXANIL
MANDIPROPAMID + DIFENOCONAZOLE
MANDIPROPAMID + DITHIANON
MANDIPROPAMID + FOLPET
MANDIPROPAMID + MANCOZEB
MANDIPROPAMID + COPPER OXYCHLORIDE
MANDIPROPAMID + ZOXMAMIDE
MEPIQUAT-CHLORIDE + METCONAZOLE
MESOSULFURON-METHYL + AMIDOSULFURON + IODOSULFURON-METHYL-SODIUM
MESOSULFURON-METHYL + IODOSULFURON-METHYL-SODIUM + THIENCARBAZONE-METHYL
MESOSULFURON-METHYL + PROPOXYCARBAZONE-SODIUM
MESOSULFURON-METHYL + THIENCARBAZONE-METHYL
METAZACHLOR + CLOMAZONE + DIMETHENAMID-P
METAZACHLOR + IMAZAMOX
METAZACHLOR + IMAZAMOX + QUINMERAC
METRAFENONE + EPOXICONAZOLE + FENPROPIMORPH
METRAFENONE + EPOXICONAZOLE
PENFLUFEN + PROTHIOCANAZOLE
PENTHIOPYRAD + PICOXYSTROBIN
PINOXADEN + CLODINAFOP-PROPARGYL + CLOQUINTOCET-MEXYL

PINOXADEN + CLODINAFOP-PROPARGYL + FLORASULAM
PINOXADEN + CLODINAFOP-PROPARGYL
PINOXADEN + CLOQUINTOCET-MEXYL + FLORASULAM
PINOXADEN + FLORASULAM
SEDAXANE + DIFENOCONAZOLE
SEDAXANE + FLUDIOXONIL
THIENCARBAZONE-METHYL + CYPROSULFAMIDE + FORAMSULFURON + IODOSULFURON-METHYL-SODIUM
THIENCARBAZONE-METHYL + CYPROSULFAMIDE + ISOXAFLUTOLE
THIENCARBAZONE-METHYL + CYPROSULFAMIDE
THIENCARBAZONE-METHYL + FORAMSULFURON + IODOSULFURON-METHYL-SODIUM
THIENCARBAZONE-METHYL + FORAMSULFURON
THIENCARBAZONE-METHYL + IODOSULFURON-METHYL-SODIUM + MESOSULFURON-METHYL
THIENCARBAZONE-METHYL + IODOSULFURON-METHYL-SODIUM
THIENCARBAZONE-METHYL + ISOXADIFEN-ETHYL
THIENCARBAZONE-METHYL + ISOXAFLUTOLE
THIENCARBAZONE-METHYL + MEFENPYR-DIETHYL
THIENCARBAZONE-METHYL + MESOSULFURON-METHYL
THIENCARBAZONE-METHYL + TEMBOTRIONE
TOPRAMEZONE + DICAMBA
TOPRAMEZONE + DIMETHENAMID-P
VALIFENALATE + FOLPET
VALIFENALATE + MANCOZEB

Corporate Licence

A Corporate Licence is issued under the following terms to The Company.

The Report is intended only for the sole and confidential use within The Company. The Company refers to all employees of The Company and employees of affiliate companies in which The Company owns, directly or indirectly, a fifty percent or greater financial interest. In addition, The Company may under adequate confidentiality agreements allow access to The Report for temporary and specific use to third parties.

The Company may produce hard copies and/or distribute electronically The Report to its employees as defined above.

Restricted Licence

A Restricted Licence is issued under the following terms to The Company.

A Restricted Licence is intended for the use of 1-3 employees of The Company. The Company refers to 1-3 employees of The Company and/or of affiliate companies in which The Company owns, directly or indirectly, a fifty percent or greater financial interest. In addition, The Company may under adequate confidentiality agreements allow access to The Report for temporary and specific use to third parties.

The Company may produce hard copies and/or distribute electronically The Report to its employees as defined above.

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 AND Mixture Products
- post 2019**

The purchase price for a Restricted Licence is	£3,850	*
The purchase price for a Corporate Licence is	£6,650	*
Company Name:		
Authorising Agent (print):		(signature):
Phone:	E-mail:	
Position in Company:		
Date:		

* Please tick (✓) the type of licence you require.

Please E-mail to:

nigel.uttley@enigmamarketingresearch.com

DISCLAIMER

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.

The fact that any product is identified as being manufactured or offered for sale is not an indication to import, sell, keep or use such products in any particular country as there may be patents in force which may make such acts unlawful. Any person considering doing so should make all necessary enquiries to ensure that to import, sell, keep or use such products should not infringe any persons patent rights in those countries which he/she intends to do so.