SAFETY DATA SHEET (SDS)	
TITLE:	**PYRIPROXYFEN 100 EC**

1.0 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Product Name	:	CIBA PYRIPROXYFEN 100 EC
Common Name	:	Pyriproxyfen 100 G/L EC
CAS No.	:	95737-68-1
Index Number	:	613-303-00-3

1.2 Relevant identified uses of the substance: Agricultural Pesticide

1.3 Details of the Manufacturer / Supplier of the safety data sheet:

Supplier	CIBA AGRIPHARMA SARL
	78 Boulevard Haussmann
	75008 Paris , France
Tel	Tel: +33 6 51 39 90 00
E-mail	administration@ciba- agripharma.com
Webpage	www. ciba- agripharma.com

1.4 Emergency Phone Number (24 hours)

+33 6 51 39 90 00

2.0 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) N° 1272/2008 on classification, labelling and packaging:

Aspiration hazard, Category 1; H304 May be fatal if swallowed and enters airways. Skin corrosion/irritation, Category 2; H315 Causes skin irritation. Skin sensitisation, Category 1; H317 May cause an allergic skin reaction. Serious eye damage/eye irritation, Category 1; H318 Causes serious eye damage. Hazardous to the aquatic environment:

Acute Hazard: Category 1; H400 Very toxic to aquatic life.
Chronic Hazard: Category 1; H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling in accordance with Regulation (EC) N° 1272/2008

DANGER

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

P261 Avoid breathing mist.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves, clothing, and eye and face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to
do. Continue rinsing.
P331 Do NOT induce vomiting.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with national regulation.

Supplementary information:
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
SP1 Do not contaminate the water with the product nor with its package (Do not clean the application equipment of the product near
superficial waters. Avoid the contamination through the systems of water evacuation of the operations or the ways).

2.3. Other hazards

May form explosive mixtures in contact with
air. Risk of static electricity generation during
handling. Avoid inhaling vapours/aerosols.
Results of PBT and vPvB assessment:
PBT: The product does not meet the criteria described for PBT according to Annex XIII of REACH.
vPvB: The product does not meet the criteria described for vPvB according to Annex XIII of REACH.

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Mixture components:

2-(1-methyl-2- (4-phenoxyphenoxy)ethoxy) pyridine (Pyriproxyfen)

Content (% w/w): 10.80%	**Classification according to Regulation (EC) N°1272/2008**
EINECS #: 429-800-1	Aquatic Acute 1 - Hazardous to the aquatic environment - Acute Hazard, Cat. 1
CAS #: 95737-68-1	Aquatic Chronic 1 - Hazardous to the aquatic environment - Chronic Hazard, Cat. 1
INDEX #: 613-303-00-3	GHS09 (Wng)
REACH #: --	H400, H410

2-ethylhexyl (2S)-2-hydroxypropanoate

Content (% w/w): 40.2%	**Classification according to Regulation (EC) N°1272/2008**
EINECS #: --	Skin Irrit. 2 - Skin corrosion/irritation, Hazard Category 2
CAS #: 186817-80-1	Skin Sens. 1 - Sensitisation - Skin, Hazard Category 1
INDEX #: --	Eye Irrit. 2 - Serious eye damage/eye irritation, Hazard Category 2
REACH #: 01-2119516238-41	GHS07 (Wng)
	H315, H317, H319

Distillates (petroleum), hydro treated light

Content (% w/w): 33.8%	**Classification according to Regulation (EC) N°1272/2008**
EINECS #: 265-149-8	Asp. Tox. 1 - Aspiration hazard, Hazard Category 1
CAS #: 64742-47-8	GHS08 (Dgr)
INDEX #: 649-422-00-2	H304
REACH #: 01-2119484819-18	

Calcium dodecylbenzenesulphonate

Content (% w/w): < 5.0%	**Classification according to Regulation (EC) N°1272/2008**
EINECS #: 247-557-8	Skin Irrit. 2 - Skin corrosion/irritation, Hazard Category 2
CAS #: 26264-06-2	Eye Dam. 1 - Serious eye damage/eye irritation, Hazard Category 1
INDEX #: --	Aquatic Chronic 4 - Hazardous to the aquatic environment - Chronic Hazard, Cat. 4
REACH #: 01-2119560592-37	GHS05 (Dgr)
	H315, H318, H413

Iso-butanol

Content (% w/w): < 3.0%
EINECS #: 201-148-0
CAS #: 78-83-1
INDEX #: 603-108-00-1
REACH #: 01-2119484609-23

Classification according to Regulation (EC) N° 1272/2008
Flam. Liq. 3 - Flammable liquids, Hazard Category 3
STOT SE 3 - Specific target organ toxicity - Single exposure, Hazard Category 3, Respiratory tract irritation
Skin Irrit. 2 - Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1 - Serious eye damage/eye irritation, Hazard Category 1
STOT SE 3 - Specific target organ toxicity - Single exposure, Hazard Category 3, Narcosis
GHS02, GHS05, GHS07 (Dgr)
H226, H335, H315, H318, H336

Non-classified substances for which there are Community workplace exposure limits:
--

PBT or vPvB substances:
Does not contain any substances that meet the criteria described for PBT or vPvB in accordance with annex XIII to the REACH.

Full text of symbols and pictograms of danger, R Phrases and H Phrases of this section are listed in section 16.

4.0 FIRST AID MEASURES

4.1. Description of first aid measures

It is recommended to the person that provides first aid measures a **previous self-protection**.

Inhalation:
Remove the person from the contaminated zone. Put him in rest position, nearly straight, with untied clothing. If necessary, apply artificial respiration.
Skin:
Remove clothing contaminated with the product immediately. Wash it before using again. Wash the affected body zones with abundant water, avoiding rubbing these zones.
Eyes:
Wash the eyes with abundant water at least during 15 minutes. In order to be sure that the washing is complete, the eyelids must remain separated from the eyeball. Do not forget to retire the contact lenses in case the victim had them.
Ingestion:
In case of ingestion, DO NOT provoke the vomit and do not give anything by oral route. Wash the mouth with plenty of water if the person is conscious. If the person is unconscious, lay him side down with the head lower than the rest of the body and the knees bended. Administer activated carbon and a saline type laxative (sodium, magnesium or similar sulphate). In case of seizures: diazepam. Place the victim into a rest position. Seek for medical attention in order to carry out a gastric washing. Digestive decontamination according to state of consciousness.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation:
Mucosal irritation. Respiratory alterations. Cough, respiratory difficulty, increase of bronchial secretions. Aspiration pneumonia.
Skin:
Skin irritation. Dermatitis.
Eyes:
Eye irritation. Conjunctivitis and tearing.
Ingestion:
Gastrointestinal alterations. Nauseas, vomits, abdominal pain, diarrhoea. Headache, light-headedness, dizziness, tremors, seizures.

4.3. Indication of any immediate medical attention and special treatment needed

- DO NOT LEAVE THE INTOXICATED PERSON ALONE AT ANY TIME.
- In case of symptoms due to inhalation, swallowing or contact of the product, seek medical advice and show the product's label or this material safety data sheet.
- Antidotes: Emetine or ephedrine syrup.
- Contraindications: --

5.0 FIRE – FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:
Chemical powder, carbon dioxide (CO_2), foam, sand and water spray.
Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.
Unsuitable extinguishing media:
Water pressure jet.

5.2. Special hazards arising from the substance or mixture

Pyriproxyfen decomposes when burning giving off toxic gases, including NO_X and CO.
In steam form, there is an explosion danger when exposed to heat or flames.

5.3. Advice for firefighters

Cool the drums/containers by water spraying and in case there is an explosion keep a security distance. Maintain the zone free of people, keeping them at a minimum distance of security (100 metres). Avoid using great volumes of water, in order to minimize the extension of the product. Work always in favour of the wind or in right angle respect to it. Take precautions in case explosions due to the gas production of the product take place.
Special protective equipment for firefighters:
Wear the basic protective equipment for fire extinction. Suitable breathing device and protective clothing (suit, gloves of PVC and rubber boots).
The Spanish Standard UNE-EN 469 specifies minimum levels of performance requirements for protective clothing used during firefighting and associated activities.
Other indications:
Do not allow run-off from fire fighting to enter drains, sewers or watercourses.
Remains of fire as well as contaminated extinguishing water must be disposed of according to current regulations.

6.0 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid long contact with the product and contaminated clothes. Avoid inhaling vapours/aerosols.
Wear protective clothes (suit, gloves and plastic boots). Carry an appropriate breathing device.
Evacuate the area by keeping a minimum safety distance of 50 meters from spill.
Stop or reduce leak if safe to do so.
Place broken packing in a suitable position in order to minimize the leak.
Eliminate all ignition sources if safe to do so (electrical hazards, sparks, hot surfaces, fire.).
Take precautions to avoid electrostatic discharge.
If necessary, ventilate the area.
Do not spray ground with water.

6.2. Environmental precautions

Avoid the entry of the product into the watercourse or the sewers network as well as in zones with vegetation.
Warn the competent authorities in case the spill enters into the sewage system or the watercourse.

6.3. Methods and material for containment and cleaning up

Avoid the dispersion of the product with mechanical barriers and absorb or retain the liquid with sand, clay or any other appropriate absorbent material. All the residues will be placed to a safe place to proceed with their elimination.
Neutralisation: No neutralization procedures are feasible.
Discouraged materials: Any material that can produce sparks.

6.4. Reference to other sections

See section 7 for information on safe handling.
See section 8 for information on exposure controls and personal protection measures.
See section 13 for information on product residues disposal.

7.0 HANDLING AND STORAGE

7.1. Precautions for safe handling

General precautions:

- Handle the product container with care, avoiding, during its transport, crushes with heavier products and not letting it fall down.
- Before applying the product be sure that the equipment you will use is the proper one and it is in perfect state.
- Follow the instructions for the product preparation indicated on the label of the container.
- Mark the treated zones, forbidding people not wearing appropriate protective equipment to enter.
- Have in hand the appropriate devices to wash eyes or skin in case of an accident.
- Avoid the skin contact with the product and inhalation of vapours/aerosols. Work always in favour of the wind.
- Do not eat, drink, or smoke during the manipulation of the product.
- Take off the stained or soaked clothing with product immediately and wash with water and soap before using it again. Do not put dirty rags, stained with the product in the pockets.
- Avoid the contact with the product.

Precautions against fire and explosion hazards:

- Work in places with appropriate ventilation and far from possible ignition sources.
- Extinguish any flame and avoid heat and static electric sources.
- Considering that the product can be electrostatically charged always ground containers when transferring.
- No smoking.

Precautions against risks of environmental pollution:

- Avoid all kind of spill or leak. Do not leave unattended open containers.
- See section 6 in case of accidental spills.

Specific handling conditions:

- Apply by normal spraying, covering all vegetation thoroughly.
- Apply in the early larval stages of insects to control, preferably to the first generation.
- To avoid the resistances, do not make with this product or any other that contains Pyriproxyfen more than one application per campaign in Scales and two applications in Whitefly.
- From the last treatment to harvest, there should be a minimum interval of 3 days in tomato and 30 days in citrus fruits. It does not proceed to fix a pre-harvest interval in stone and pomaceous fruit trees.
- Do not enter treated areas until the crop is completely dry.
- Its mixture with mineral oils (200-500 ml/hl) could be beneficial.
- During handling and cleaning of equipments, the same protection as during application will be used.
- SPo 2: Wash all protective clothing after use.
- SPo 5: Ventilate treated greenhouses until spray has dried before re-entry.

7.2. Conditions for safe storage, including any incompatibilities

Storage perfectly closed, in a cold, dry and ventilated place, away from direct light, flames, sparks or hot surfaces. Store at room temperature in a cool place, but not below 0ºC. Avoid temperatures higher than 30ºC.

Incompatible products:

Do not mix with alkaline reaction products.

Packing material:

Keep only in the original container.

7.3. Specific end use(s)

Authorized uses indicated in the label of the product.
Reserved use to agriculturists and professional applicators.
There are no specific recommendations for the use of this product other than those already referred.

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1. Control parameters

Monitoring of the working environment must be ensured in order to determine the effectiveness of the ventilation or other control measures whenever a product or any of its components have associated one or more than one exposure limit.
The Spanish Standard UNE-EN 689 sets the guidelines for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.

Components with workplace exposure limits

CAS #: 78-83-1 Iso-butanol
VLA-ED: 154 mg/m^3 (OEL Spain)

DNEL (Derived No-Effect Level)

Not known.

PNEC (Predicted No-Effect Concentration)
Not known.

8.2. Exposure controls

Technical control measures
Work in places with appropriate ventilation. Work always in favour of the wind.
Wash hands after each use of the product.
Have in hand the appropriate devices to wash eyes or skin in case of an accident.

Individual protection measures
EYE / FACE PROTECTION:
Protective glasses or facial mask of total protection.
Have in hand the appropriate devices to wash eyes or skin in case of an accident.

SKIN PROTECTION:
Wear PVC gloves and appropriate protective clothing type 3 or 4 (tight against liquids).
Rubber boots (with the trousers on the boots).
Have in hand the appropriate devices to wash eyes or skin in case of an accident.

RESPIRATORY PROTECTION:
Wear respiratory protective equipment (RPE) with FFP2 protection.
In case of fire autonomous breathing equipment must be used.

THERMAL HAZARDS:
Does not proceed.

Environmental exposure controls
Avoid the entry of the product into the watercourse or the sewers network as well as in zones with vegetation.
Warn the competent authorities in case the spill enters into the sewage system or the watercourse.
Prevent polluting emissions in the atmosphere and soil.
Observe the normal precautions when working with this kind of products.
Comply with local and national regulations on environmental issues.
Environmental risks reduction:
SPe 3: To protect aquatic organisms respect an unsprayed buffer zone of 20 or 10 m. with 75% drift reduction nozzles in citrus fruits, of 25 or 15 m. with 75% drift reduction nozzles in fruit trees to surface water bodies.
SPe 8: To protect pollinating insects in greenhouse tomatoes, cover beehives during application and for 48 hours after treatment.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Yellowish liquid	
Odour:	Aromatic	
Odour threshold:	Not available	
pH (1% water solution):	4.5 - 5.5	CIPAC MT 75.3
Melting point/freezing point:	Pyriproxyfen: 48 - 50ºC	
Initial boiling point and boiling range:	Pyriproxyfen: 318ºC	
Flash point:	66ºC	EEC A.9
Evaporation rate:	Not available	
Flammability (solid, gas):	Not applicable for liquids.	
Lower explosive limit:	Light naphtha: 0.7% (v/v) in air	
Upper explosive limit:	Light naphtha: 7.0% (v/v) in air	
Vapour pressure:	Pyriproxyfen: < 0.013 mPa (23ºC)	
Vapour density:	Not available	
Density:	0.90 - 0.95 g/ml	ASTM D-4052/96
Water solubility:	Emulsifier	
Solvent-oil solubility:	Not available	
Partition coefficient: n-octanol/water:	Pyriproxyfen: Log P_{OW} = 5.37 (21ºC)	
Auto-ignition temperature:	260ºC	EEC A.15
Decomposition temperature:	Not available	
Viscosity:	11.57 cP (20ºC)	CIPAC MT 22
Explosive properties:	Does not present explosive properties	EEC A.14
Oxidising properties:	Does not present oxidising properties	EEC A.21

9.2. Other information

Surface tension:	27.7 mN/m (20ºC)	EEC A.5

10.0 STABILITY AND RELIABILITY

10.1. Reactivity

See section 10.3.

10.2. Chemical stability

The product stored in its original packing and in normal conditions keeps its initial properties during a minimum period of 2 years.
Stable to light and heat.
See section 7 for recommended handling and storage practices.

10.3. Possibility of hazardous reactions

Due to its content in Naphtha, it may form explosive mixtures with air.
Pyriproxyfen is decomposed during burning producing toxic gases, including NO_X and CO.

10.4. Conditions to avoid

Excessive heat and direct sunlight.
Avoid the proximity of fire and sparks.

10.5. Incompatible materials

Do not mix with strongly alkaline or acidic products.
Avoid contact with strong oxidizers.

10.6. Hazardous decomposition products

Oxides of nitrogen and carbon, hydrochloric acid and sulphur.
High temperatures may cause release of toxic and irritating gases.
See section 5 for information on Hazardous combustion products.

11.0 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

ACUTE TOXICITY

LD_{50} Oral (rat):	> 2000 mg/Kg body weight	OECD 423
LD_{50} Dermal (rat):	> 2000mg/Kg body weight	OECD 402
LC_{50} Inhalation (rat):	No data available	

SKIN CORROSION / IRRITATION

Skin:	Irritant (GHS: Cat. 2). Causes skin irritation.	OECD 404
Eyes:	Irritant (GHS: Cat. 1). Causes serious eye damage.	OECD 405

RESPIRATORY OR SKIN SENSITISATION
Skin sensitisation (GHS: Cat. 1). May cause an allergic skin reaction. OECD 429

GERM CELL MUTAGENICITY
There is no evidence known.

CARCINOGENICITY
There is no evidence known.

REPRODUCTIVE TOXICITY
There is no evidence known.

STOT - Single and repeated exposure
There is no evidence known.

ASPIRATION HAZARD
Aspiration hazard (GHS: Cat. 1). May be fatal if swallowed and enters airways.

EXPOSURE ROUTES AND RELATED SYMPTOMS

Exposure occurs through vapours inhalation, ingestion and skin and eye contact.
See section 4.2 for information on main acute and delayed symptoms and effects by exposure route.

OTHER INFORMATION

Pyriproxyfen: ADI: 0.07 mg/Kg body weight/day
AOEL: 0.04 mg/Kg body weight/day

12.0 ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to birds:

LD_{50} Acute oral in Cotturnix japonica: > 2000 mg/kg body weight
LD_{50} Acute oral in Wild duck: > 2000 mg/Kg body weight
Data estimated from the active substance (Pyriproxyfen)

Toxicity to fish and aquatic fauna in general:

LC_{50}, 96h, in Oncorhynchus mykiss:	5.63 mg/l	OECD 203
ErC_{50}, 72h, in Pseudokirchneriella Subcapitata:	6.56 mg/l	OECD 201
EC_{50}, 48h, in Daphnia Magna:	0.293 mg/l	OECD 202

Toxicity to bees:

LD_{50}, 96, oral: 0.541 µl/bee
LD_{50}, 96h, contact: 0.285 µl/bee
Data estimated from the active substance (Pyriproxyfen)

12.2. Persistence and degradability

Pyriproxyfen is completely degradated in an average of 3.5 to 15.6 days.

12.3. Bioaccumulative potential

Neither Pyriproxyfen nor its metabolites are accumulated in environment.
Partition coefficient: n-octanol/water: Pyriproxyfen: Log P_{OW} = 5.37 (21ºC)
Bioconcentration factor (BCF): Pyriproxyfen: 1379

12.4. Mobility in soil

Pyriproxyfen on the ground has practically no mobility; it does not contaminate underground waters.

12.5. Results of PBT and vPvB assessment

PBT: The product does not meet the criteria described for PBT according to Annex XIII of REACH.
vPvB: The product does not meet the criteria described for vPvB according to Annex XIII of REACH.

12.6. Other adverse effects

The active substances are not listed in Annex I of Regulation (EC) Nº 1005/2009 on substances that deplete the ozone layer.
No more relevant data available.

13.0 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Obey all regulations, both local and national, on disposal of waste.
See section 8 for information on exposure control and personal protection.

Product:

Waste identification (Code EWC):
02 01 08* Agrochemical waste containing dangerous substances.
Prevent the production of waste and analyse possible methods for revaluation or recycling.
Do not pour under any circumstances down drains nor to the environment.

Contaminated packaging:
Waste identification (Code EWC):
15 01 10* Packaging containing residues of or contaminated by dangerous substances.
No residues will remain due to the use of the product if the empty packaging is washed 3 times with water, adding this water to the solution. The package, washed as above mentioned, may be disposed according to the local legislation, in a no contaminant place.
Do not manipulate the containers nor expose them to heat, sparks or other ignition sources: They may explode.
Do not remove labels from containers until they have been properly cleaned.

14.0 TRANSPORT INFORMATION

14.1. UN number

UN 3082

14.2. UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pyriproxyfen and Solvent Naphtha (petroleum) in mixture)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pyriproxyfen and Solvent Naphtha (petroleum) in mixture)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pyriproxyfen and Solvent Naphtha (petroleum) in mixture)

14.3. Transport hazard class(es)

9 - Miscellaneous dangerous substances and articles
Subsidiary risks: None.

14.4. Packing group

III

14.5. Environmental hazards

ADR/RID: Environmentally hazardous substance
IMDG: Marine Pollutant

14.6. Special precautions for user

ADR/RID:
Hazard identification No.: 90
Classification code: M6
Transport category (Tunnel restriction code): 3 (E)
IMDG:
EmS No.: F-A / S-F

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Does not apply.

15.0 REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The active substances are not listed in Annex I of **Regulation (EC) Nº 1005/2009** on substances that deplete the ozone layer.

Directive 2012/18/UE and its modifications:
The product is included in categories:
Section 'E' - E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Spanish Royal Decree 379/2001 and its modifications:
There is no specific ITC for "Environmentally hazardous products", but it is included in the scope described in article 2 of the Royal Decree cited above.

The product is included in the scope of application of **Regulation (EC) Nº 1107/2009** concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC

The packaging of the product is classified according to **Law 11/1997** and its modifications so the end user is responsible for delivering it to a collection point of those indicated by the Distributor that has supplied the product.

The product is not and does not contain any of the substances listed in **Regulation (EC) Nº 273/2004** on drug precursors.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed.

16.0 OTHER INFORMATION

The information contained herein relates only to the specified material identified. CIBA AGRIPHARMA, believes that such information is accurate and reliable as of the data of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. CIBA AGRIPHARMA urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

This material safety data sheet adopts the provisions of the European Commission Directive 2001/58/EC and Regulations 1272/2008 (CLP) and 453/2010 (REACH).