1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the product

Product Code: FAL03
Product Description: UPL CHLOROTHALONIL
Pure substance/preparation: Preparation

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: fungicide

1.3 Details of the supplier of the safety data sheet

Supplier: United Phosphorus Ltd
The Centre
Birchwood Park
Warrington
WA3 6YN
Cheshire, UK

Telephone: +44 (0) 1925 819999
Telefax: +44 (0) 1925 917425
E-mail Address: info.uk@uniphos.com

1.4 Emergency telephone number

Emergency Telephone Number: (CARECHEM 24): +44 208 762 8322
United Kingdom: NHS Direct (UK): +44 0845 46 47
2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) Xn - Harmful  
N - Dangerous for the environment

R-code(s) Carc. cat. 3; R40 - N; R20 - Xi; R36/37 - R43 - N; R50/53

For the full text of the R phrases mentioned in this Section, see Section 16

2.2 Label Elements

Labelling according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) Xn - Harmful  
N - Dangerous for the environment

R -phrase(s)  
R20 - Harmful by inhalation  
R40 - Limited evidence of a carcinogenic effect  
R43 - May cause sensitization by skin contact  
R36/37 - Irritating to eyes and respiratory system  
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S -phrase(s)  
S23 - Do not breathe spray  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S35 - This material and its container must be disposed of in a safe way  
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection  
S57 - Use appropriate container to avoid environmental contamination

2.3 Other hazards

No information available.
3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC No.</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Dir.67/548)</th>
<th>EU - GHS Substance Classification</th>
<th>REACH No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorothalonil</td>
<td>217-588-1</td>
<td>1897-45-6</td>
<td>50 - 60</td>
<td>Carc. Cat. 3; R40 T+; R26 Xi; R41 Xi; R37 R43 N; R50-53</td>
<td>STOT SE 3 (H335) Carc. 2 (H351) Acute Tox. 2 (H330) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td>No data available</td>
</tr>
<tr>
<td>1,2-Benzisothiazolin-3-one</td>
<td>-</td>
<td>2634-33-5</td>
<td>&lt; 1</td>
<td>Xn; R22 Xi; R43 C;R34 N;R50</td>
<td>Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

For the full text of the R phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16
4. **FIRST AID MEASURES**

4.1 **Description of first-aid measures**

**Eye Contact**  
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes  
Consult a physician.

**Skin Contact**  
Wash off immediately with plenty of water  
Consult a physician if necessary

**Ingestion**  
Call a POISON CENTER or doctor/physician if exposed or you feel unwell  
Do NOT induce vomiting

**Inhalation**  
Move to fresh air  
Call a physician or poison control center immediately

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

No information available.

4.3 **Indication of immediate medical attention and special treatment needed**

Treat symptomatically.

5. **FIRE-FIGHTING MEASURES**

5.1 **Extinguishing media**

**Suitable Extinguishing Media**  
Foam  
Dry powder  
Carbon dioxide (CO2)  
Water spray

**Unsuitable Extinguishing Media**  
Do not use a solid water stream as it may scatter and spread fire.

5.2 **Special hazards arising from the substance or mixture**

**Special hazard**  
Burning produces obnoxious and toxic fumes.

5.3 **Advice for firefighters**

Wear self-contained breathing apparatus and protective suit.
6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas
Avoid contact with skin, eyes and clothing
Use personal protective equipment

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so
Do not allow material to contaminate ground water system
Do not flush into surface water or sanitary sewer system

6.3 Methods and materials for containment and cleaning up
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Handling
Ensure adequate ventilation
Avoid contact with eyes
Ensure that eyewash stations and safety showers are close to the workstation location
Wear personal protective equipment: Half mask with a particle filter P2 (EN 143)

Hygiene Measures
Do not eat, drink or smoke when using this product
Wash hands after handling

7.2 Conditions for safe storage, including any incompatibilities
Keep containers tightly closed in a cool, well-ventilated place
Store away from frost.

7.3 Specific end uses
No information available.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

Apply technical measures to comply with the occupational exposure limits.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

8.2 Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

- **Eye Protection**: Safety glasses with side-shields.
- **Skin Protection**: Long sleeved clothing.
- **Hand Protection**: Protective gloves.
- **Respiratory Protection**: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls

No information available.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>off-white.</td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>suspension concentrate</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6 - 9</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible with water</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information

VOC Content No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of Hazardous Reactions

No information available.

10.4 Conditions to Avoid

Avoid extreme high or low temperatures.

10.5 Incompatible materials

No materials to be especially mentioned

10.6 Hazardous decomposition products

Burning produces obnoxious and toxic fumes
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

<table>
<thead>
<tr>
<th>Local effects</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Irritating to respiratory system.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>There is no data available for this product.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>There is no data available for this product.</td>
</tr>
</tbody>
</table>

LD50 Oral: 4200 mg/kg (rat)
LD50 Dermal: > 20000 mg/kg (rabbit)

Skin corrosion/irritation: No information available.
Sensitization: No information available.
Repeated Dose Toxicity: No information available.
Carcinogenic effects: No information available.
Mutagenic Effects: No information available.
Reproductive Effects: No information available.
12. ECOLOGICAL INFORMATION

12.1 Toxicity
EC50/24h/daphnia = 0.9 mg/l

12.2 Persistence and degradability
No information available.

12.3 Bioaccumulative potential
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorothalonil</td>
<td>2.9</td>
</tr>
<tr>
<td>1,2-Benzisothiazolin-3-one</td>
<td>1.3</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

<table>
<thead>
<tr>
<th>Waste from Residues / Unused Products</th>
<th>Dispose of in accordance with local regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated Packaging</td>
<td>Empty containers should be taken for local recycling, recovery or waste disposal.</td>
</tr>
<tr>
<td>EWC waste disposal No</td>
<td>020108 - agrochemical waste containing dangerous substances.</td>
</tr>
<tr>
<td>Other Information</td>
<td>According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.</td>
</tr>
</tbody>
</table>
# 14. TRANSPORT INFORMATION

## ADR/RID

<table>
<thead>
<tr>
<th>14.1. UN-No</th>
<th>UN3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. Proper Shipping Name</td>
<td>Environmentally hazardous substance, liquid, n.o.s. ( Chlorothalonil )</td>
</tr>
<tr>
<td>14.3 Hazard Class</td>
<td>9</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Dangerous for the environment</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>274, 335, 601</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>(E)</td>
</tr>
</tbody>
</table>

## IMDG/IMO

<table>
<thead>
<tr>
<th>14.1. UN-No</th>
<th>UN3082</th>
</tr>
</thead>
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<td>9</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Marine pollutant</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>274, 335</td>
</tr>
</tbody>
</table>

## IATA/ICAO

<table>
<thead>
<tr>
<th>14.1. UN-No</th>
<th>UN3082</th>
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</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Dangerous for the environment</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>A97, A158</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

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

CLASSIFICATION ACCORDING TO MAPP 15472
THE REGISTRATION APPROVAL

- To avoid risks to man and the environment, comply with the instructions for use

International Inventories

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td></td>
</tr>
<tr>
<td>CHINA</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
</tr>
</tbody>
</table>

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out.
Full text of R-phrases referred to under sections 2 and 3
R20 - Harmful by inhalation
R22 - Harmful if swallowed
R26 - Very toxic by inhalation
R34 - Causes burns
R37 - Irritating to respiratory system
R40 - Limited evidence of a carcinogenic effect
R41 - Risk of serious damage to eyes
R43 - May cause sensitization by skin contact
R50 - Very toxic to aquatic organisms
R36/37 - Irritating to eyes and respiratory system
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H330 - Fatal if inhaled
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Revision Date 15-Mar-2012
Revision Note not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
The information contained is based on our knowledge of the product at the date of publishing.
It applies to the PRODUCT AS SUCH. In case of formulation or mixture, make sure that a new danger will not appear.
Users are advised of possible additional hazards when the product is used in applications for which it was not intended.
This sheet shall only be used and duplicated for prevention and Safety purposes.
For rates and use recommendations, refer to the information displayed on the packaging.
It is the responsibility of the handlers of the product to pass on this safety data sheet to any subsequent persons who will come
into contact with the product.

End of Safety Data Sheet