SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Trade name EXTERIS STRESSGARD
Product code (UVP) 81753938

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use Fungicide
Restrictions on use See product label for restrictions.

1.3 Details of the supplier of the safety data sheet
Supplier Bayer Environmental Science
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
United Kingdom
Telephone 00800-1214 9451
Telefax +44(0)1223 426240
Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.
Emergency telephone no. 0800-220876 (UK 24 hr)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.
Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.
Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.
Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.
Hazard label for supply/use required.

Hazardous components which must be listed on the label:
- Fluopyram
- Trifloxystrobin
Signal word: Warning

Hazard statements

H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
EUH208 Contains Trifloxystrobin, 1,2-benzisothiazolin-3-one. May produce an allergic reaction.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature
Suspension concentrate (=flowable concentrate)(SC)
Fluopyram/Trifloxystrobin 12.5:12.5 g/l

Hazardous components
Hazard statements according to Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No. / EC-No. / REACH Reg. No.</th>
<th>Classification REGULATION (EC) No 1272/2008</th>
<th>Conc. [%]</th>
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</thead>
<tbody>
<tr>
<td>Fluopyram</td>
<td>658066-35-4 619-797-7</td>
<td>Aquatic Chronic 2, H411</td>
<td>1.19</td>
</tr>
<tr>
<td>Trifloxystrobin</td>
<td>141517-21-7</td>
<td>Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
<td>1.19</td>
</tr>
<tr>
<td>Alcohol ethoxylate phosphate ester</td>
<td>73038-25-2</td>
<td>Eye Dam. 1, H318 Skin Irrit. 2, H315 Acute Tox. 4, H302</td>
<td>&gt; 5.00 – &lt; 10.00</td>
</tr>
<tr>
<td>Alcohols, C12-16, ethoxylated (&gt;5-15 EO)</td>
<td>68551-12-2 500-221-7</td>
<td>Eye Dam. 1, H318 Acute Tox. 4, H302</td>
<td>&gt; 1.00 – &lt; 25.00</td>
</tr>
<tr>
<td>1,2-Benzisothiazol-3(2H)-one</td>
<td>2634-33-5 220-120-9</td>
<td>Eye Dam. 1, H318 Aquatic Acute 1, H400</td>
<td>&gt; 0.005 – &lt; 0.05</td>
</tr>
</tbody>
</table>
Further information

Trifloxystrobin 141517-21-7  M-Factor: 100 (acute)

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation
Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment
Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet
5.2 Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions

Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

6.2 Environmental precautions

Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean floors and contaminated objects with plenty of water.

Additional advice

Check also for any local site procedures.

6.4 Reference to other sections

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion

No special precautions required.

Hygiene measures

When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands immediately after work, if necessary take a shower. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating,
drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

7.2 Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers**
Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from frost.

**Advice on common storage**
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)
Refer to the label and/or leaflet.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluopyram</td>
<td>658066-35-4</td>
<td>0.34 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Trifloxystrobin</td>
<td>141517-21-7</td>
<td>2.7 mg/m³ (SK-SEN)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>1,2-Propanediol (Particulate.)</td>
<td>57-55-6</td>
<td>10 mg/m³ (TWA)</td>
<td>12 2011</td>
<td>EH40 WEL</td>
</tr>
<tr>
<td>1,2-Propanediol (Total vapour and particulates.)</td>
<td>57-55-6</td>
<td>474 mg/m³/150 ppm (TWA)</td>
<td>12 2011</td>
<td>EH40 WEL</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**
Respiratory protection is not required under anticipated circumstances of exposure.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

**Hand protection**
Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0.4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

**Eye protection**
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection**
Wear standard coveralls and Category 3 Type 4 suit.
If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Form, suspension
Colour, green
Odour, characteristic
Odour Threshold, No data available
pH, 6.0 at 100 % (23 °C)
Flash point, > 93.3 °C
Ignition temperature, 420 °C
Minimum ignition energy, Not applicable
Vapour pressure, No data available
Evaporation rate, No data available
Relative vapour density, No data available
Density, 1.05 g/cm³ at 20 °C
Water solubility, dispersible
Partition coefficient: n-octanol/water, Not applicable
Partition coefficient: n-octanol/water, Fluopyram: log Pow: 3.3
Trifloxystrobin: log Pow: 4.5 at 25 °C
Viscosity, dynamic, 60 - 200 mPa.s at 20 °C Velocity gradient 20 /s
25 - 75 mPa.s at 20 °C Velocity gradient 100 /s
Surface tension, 33.0 mN/m at 20 °C
Oxidizing properties, No oxidizing properties
Explosivity, Not explosive
9.2 Other information, Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Thermal decomposition, Stable under normal conditions.

10.2 Chemical stability, Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Store only in the original container.

10.6 Hazardous decomposition products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity  
LD50 (Rat) > 5,000 mg/kg

Acute inhalation toxicity  
LC50 (Rat) > 5.0 mg/l

Acute dermal toxicity  
LD50 (Rat) > 5,000 mg/kg

Skin irritation  
slight irritation (Rabbit)

Eye irritation  
Mild eye irritation. (Rabbit)

Sensitisation  
Sensitising (Mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – single exposure

Fluopyram: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Fluopyram did not cause specific target organ toxicity in experimental animal studies. Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Fluopyram caused at high dose levels an increased incidence of tumours in rats in the following organ(s): Liver.  
Fluopyram caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Thyroid.  
The tumours seen with Fluopyram were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers these tumours is not relevant to humans. Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Fluopyram caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Fluopyram is related to parental toxicity. Trifloxystrobin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Trifloxystrobin is related to parental toxicity.

Assessment developmental toxicity
Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity. Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity.

**Aspiration hazard**
Based on available data, the classification criteria are not met.

**Further information**
Acute toxicity studies have been bridged from a similar formulation(s). The non-acute information pertains to the active ingredient(s).

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**SECTION 12: ECOLOGICAL INFORMATION**

12.1 Toxicity

**Toxicity to fish**
LC50 (Oncorhynchus mykiss (rainbow trout)) 1.42 mg/l
Exposure time: 96 h

**Toxicity to aquatic invertebrates**
EC50 (Daphnia magna (Water flea)) 0.75 mg/l
Exposure time: 48 h

**Toxicity to aquatic plants**
EC50 (Raphidocelis subcapitata (freshwater green alga)) 5.25 mg/l
Growth rate; Exposure time: 72 h

12.2 Persistence and degradability

**Biodegradability**
Fluopyram: Not rapidly biodegradable
Trifloxystrobin: Not rapidly biodegradable

**Koc**
Fluopyram: Koc: 279
Trifloxystrobin: Koc: 2377

12.3 Bioaccumulative potential

**Bioaccumulation**
Fluopyram: Bioconcentration factor (BCF) 18
Does not bioaccumulate.
Trifloxystrobin: Bioconcentration factor (BCF) 431
Does not bioaccumulate.

12.4 Mobility in soil

**Mobility in soil**
Fluopyram: Moderately mobile in soils
Trifloxystrobin: Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

**PBT and vPvB assessment**
Fluopyram: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Trifloxystrobin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

**Additional ecological**
No other effects to be mentioned.
SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging
Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.
Add washings to sprayer at time of filling.
Dispose of empty and cleaned packaging safely.
Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.
Return large containers to supplier.
Follow advice on product label and/or leaflet.

Waste key for the unused product 02 01 08* agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN
14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environm. Hazardous Mark YES
Hazard no. 90
Tunnel Code E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG
14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Marine pollutant YES

IATA
14.1 UN number 3082
### 14.2 Proper shipping name
ENVIROMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)

### 14.3 Transport hazard class(es)
9

### 14.4 Packing group
III

### 14.5 Environm. Hazardous Mark
YES

#### UK 'Carriage' Regulations

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>3082</th>
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<tr>
<td>14.2 Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION)</td>
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<tr>
<td>14.3 Transport hazard class(es)</td>
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<tr>
<td>14.4 Packing group</td>
<td>III</td>
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<tr>
<td>14.5 Environm. Hazardous Mark</td>
<td>YES</td>
</tr>
<tr>
<td>Emergency action code</td>
<td>3Z</td>
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</tbody>
</table>

### 14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.

### SECTION 15: REGULATORY INFORMATION

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

**UK and Northern Ireland Regulatory References**

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

**Transport**
- Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)
- Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)

**Supply and Use**
- Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
- Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009
- Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)
- EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits
- Control of Pesticide Regulations 1986
- Dangerous Substances and Explosive Atmospheres Regulations 2002

**Waste Treatment**
- Environmental Protection Act 1990, Part II
- Environmental Protection (Duty of Care) Regulations 1991
- The Waste Management Licensing Regulations 1994 (as amended)
- Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)
- Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)
Water Resources Act 1991
Anti-Pollution Works Regulations 1999

Further information
WHO-classification: U (Unlikely to present acute hazard in normal use)

15.2 Chemical Safety Assessment
A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
Conc. Concentration
EC-No. European community number
ECx Effective concentration to x %
EH40 WEL Worker Exposure Limit
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
EN European Standard
EU European Union
IATA International Air Transport Association
IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx Inhibition concentration to x %
IMDG International Maritime Dangerous Goods
LCx Lethal concentration to x %
LDx Lethal dose to x %
LOEC/LOEL Lowest observed effect concentration/level
MARPOL MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S. Not otherwise specified
NOEC/NOEL No observed effect concentration/level
OECD Organization for Economic Co-operation and Development
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
SI Statutory Instrument
TWA Time weighted average
UN United Nations
WHO        World health organisation

The above information is intended to give general health and safety guidance on the storage and transport of the product.
It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.
The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.
The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.
No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.


Changes since the last version are highlighted in the margin. This version replaces all previous versions.