

FAZOR STAR

Version	Revision Date:	MSDS Number:	Country: IE
1.4	25.05.2016	400000003984	Language: EN

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : FAZOR STAR

Product code : 400000003984

1.2 Relevant identified uses of the substance or mixture and uses advised againstUse of the Sub-
stance/Mixture : Plant growth regulatorRecommended restrictions
on use : Agriculture, For professional users only.**1.3 Details of the supplier of the safety data sheet****Details of the supplier of the safety data sheet**

Company: Arysta LifeScience Great Britain Ltd.
Brooklands Farm, Cheltenham Road
Evesham, Worcestershire
United Kingdom
WR11 2LS
Telephone : +44 1386 425500

Prepared by sds.request@arysta.com

Further information for the safety data sheet :
sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone num-
ber: +44 (0) 1235 239 670 (NCEC)
National Poisons Information Centre
Telephone: 01 8092566 or 01 8379964

For additional emergency telephone numbers see section 16 of
the Safety Data Sheet.

SECTION 2: Hazards identification

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2.1 Classification of the substance or mixture**Classification (REGULATION (EC) No 1272/2008)**

Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Hazard statements : H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Response:
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Chemical nature : Maleic hydrazide, potassium salt - 80%

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 10 - < 20
Alkyl naphthalene sulfonate, sodium salt	Not Assigned	Eye Irrit. 2; H319	>= 1 - < 10
potassium hydroxide	1310-58-3 215-181-3	Acute Tox. 3; H301 Skin Corr. 1A; H314 Eye Dam. 1; H318	>= 1 - < 2
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	68081-81-2 268-356-1	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 5

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures**4.1 Description of first aid measures**

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|-------------------------|---|
| If inhaled | : Remove to fresh air.
Obtain medical attention. |
| In case of skin contact | : Remove contaminated clothing and shoes.
Wash off with warm water and soap.
If symptoms persist, call a physician. |
| In case of eye contact | : Rinse thoroughly with plenty of water, also under the eyelids.
If symptoms persist, call a physician. |
| If swallowed | : Do NOT induce vomiting.
Rinse mouth with water.
Obtain medical attention. |

4.2 Most important symptoms and effects, both acute and delayed

- | | |
|----------|-----------------------------|
| Symptoms | : No information available. |
| Risks | : No information available. |

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|-----------|--|
| Treatment | : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine. |
|-----------|--|

SECTION 5: Firefighting measures**5.1 Extinguishing media**

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|--------------------------------|---|
| Suitable extinguishing media | : Carbon dioxide (CO ₂)
Dry powder
Foam
Water mist |
| Unsuitable extinguishing media | : Water spray |

5.2 Special hazards arising from the substance or mixture

- | | |
|---------------------------------------|-----------------------------|
| Specific hazards during fire-fighting | : No information available. |
|---------------------------------------|-----------------------------|

5.3 Advice for firefighters

- | | |
|---|---|
| Special protective equipment for firefighters | : In the event of fire, wear self-contained breathing apparatus.
Full protective flameproof clothing |
| Further information | : Use water spray to cool unopened containers.
Prevent fire extinguishing water from contaminating surface water or the ground water system. |

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SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Wear suitable protective equipment.

6.2 Environmental precautions

Environmental precautions : Do not allow material to contaminate ground water system.
Do not allow uncontrolled discharge of product into the environment.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : Handle and open container with care.
Use only with adequate ventilation.
Avoid dust formation.
Do not get in eyes or mouth or on skin.
Wear suitable protective clothing, gloves and eye/face protection.
Wash thoroughly after handling.
Keep container closed when not in use.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. When using do not eat, drink or smoke. Wash thoroughly after handling. Keep working clothes separately. Remove and wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep only in the original container.

Other data : Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s) : Plant growth regulator

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form	Control parameters	Basis
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		of exposure)		
potassium hydroxide	1310-58-3	OELV - 15 min (STEL)	2 mg/m3	IE OEL

8.2 Exposure controls**Engineering measures**

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection
Remarks : Chemical resistant protective gloves

Skin and body protection : Long sleeved clothing
Remove and wash contaminated clothing before re-use.

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance : granular

Colour : light brown

Odour : very faint, to, odourless

Odour Threshold : No data available

pH : 8 - 12, 2 %(as aqueous solution)

Melting point/range : ca. 304 °C

Boiling point/boiling range : Not applicable

Flash point : >= 100 °C

Evaporation rate : Not applicable

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

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Relative density	: 0,5 - 0,8
Density	: 0,5 - 0,8 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: Not applicable

9.2 Other information

Self-Accelerating decomposition temperature (SADT)	: Method: No information available.
Oxidizing potential	: The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	: No dangerous reaction known under conditions of normal use.
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10.4 Conditions to avoid

Conditions to avoid	: Extremes of temperature and direct sunlight.
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10.5 Incompatible materials

Materials to avoid	: Strong acids and strong bases Oxidizing agents
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10.6 Hazardous decomposition products

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Product:**

Acute oral toxicity : LD50 (Rat, male and female): 7.500 mg/kg
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
GLP: yes

Components:**potassium hydroxide:**

Acute oral toxicity : LD50 Oral (Rat): 273 mg/kg

Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation**Product:**

Species: Rabbit

Result: Mild skin irritation

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

Serious eye damage/eye irritation**Product:**

Species: Rabbit

Result: No eye irritation

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

Respiratory or skin sensitisation**Product:**

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Product:**

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.

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Carcinogenicity**Product:**

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

Reproductive toxicity**Product:**

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

STOT - single exposure**Product:**

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

STOT - repeated exposure**Product:**

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

Further information**Product:**

Remarks: No data available

SECTION 12: Ecological information**12.1 Toxicity****Product:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 130,8 mg/l Exposure time: 96 h GLP: yes NOEC (Oncorhynchus mykiss (rainbow trout)): 111,3 mg/l Exposure time: 96 h GLP: yes
Toxicity to daphnia and other aquatic invertebrates	: NOEC (Daphnia magna (Water flea)): 207,2 mg/l Exposure time: 48 h GLP: yes EC50 (Daphnia magna (Water flea)): 244 mg/l Exposure time: 48 h GLP: yes
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (microalgae)): 445,2 mg/l

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Exposure time: 72 h
GLP: yes

NOEC (*Pseudokirchneriella subcapitata* (microalgae)): 179,6 mg/l
Exposure time: 72 h
GLP: yes

EC50 (*Myriophyllum aquaticum* (aquatic macrophyte plant)): 12,3 mg/l
Exposure time: 7 d
GLP: yes

NOEC (*Myriophyllum aquaticum* (aquatic macrophyte plant)): 3,2 mg/l
Exposure time: 7 d
GLP: yes

EC50 (*Myriophyllum aquaticum* (aquatic macrophyte plant)): 54,4 mg/l
Exposure time: 4 d
GLP: yes

NOEC (*Myriophyllum aquaticum* (aquatic macrophyte plant)): 10,0 mg/l
Exposure time: 4 d
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC: 30 mg/l
Exposure time: 21 d
Species: *Oncorhynchus mykiss* (rainbow trout)
GLP: yes

LC50: > 88 mg/l
Exposure time: 21 d
Species: *Oncorhynchus mykiss* (rainbow trout)
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 110 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
GLP: yes

NOEC: 0,95 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
GLP: yes

12.2 Persistence and degradability**Product:**

Biodegradability : Remarks: No data available

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12.3 Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil**Product:**

Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information**14.1 UN number**

ADN	: UN 3077
ADR	: UN 3077
RID	: UN 3077
IMDG	: UN 3077
IATA	: UN 3077

14.2 UN proper shipping nameADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Alcohols, ethoxylated, 1,2-dihydropyridazine-3,6-dione, potassium salt)

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ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Alcohols, ethoxylated, 1,2-dihydropyridazine-3,6-dione, potassium salt)
RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Alcohols, ethoxylated, 1,2-dihydropyridazine-3,6-dione, potassium salt)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Alcohols, ethoxylated, 1,2-dihydropyridazine-3,6-dione, potassium salt)
IATA	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., Environmentally hazardous substance, solid, n.o.s. (Alcohols, ethoxylated, 1,2-dihydropyridazine-3,6-dione, potassium salt)

14.3 Transport hazard class(es)

ADN	: 9
ADR	: 9
RID	: 9
IMDG	: 9
IATA	: 9

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
ADR	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (E)
RID	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
IATA	
Packing instruction (cargo)	: 956

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aircraft)
Packing instruction (passenger aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards**ADN**

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Neither banned nor restricted

Restrictions on the marketing and use of certain dangerous substances and preparations : Neither banned nor restricted

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Neither banned nor restricted

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E2	ENVIRONMENTAL HAZARDS	Quantity 1 200 t	Quantity 2 500 t
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Water contaminating class (Germany) : WGK 1 slightly water endangering

15.2 Chemical Safety Assessment

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SECTION 16: Other information**Full text of H-Statements**

H301	: Toxic if swallowed.
H302	: Harmful if swallowed.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation

(Q)SAR - (Quantitative) Structure Activity Relationship; 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; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not

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to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

IE / EN

Carechem24 International Worldwide Coverage**Emergency Phone Number**

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 0800 100 7479
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Emergency Phone Number	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	South Africa	+27 21 300 2732
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States of America and Canada	+1866 928 0789 +1 215 207 0061
<u>Latin America:</u>	Brazil	+55 11 3197 5891
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670

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