

## SAFETY DATA SHEET - FAZOR

This safety data sheet does not form part of the label approved under the Plant Protection Product Regulations 1995. Following the instructions on the pesticide label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

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

Trade name : Fazor

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

Use of the Substance/Mixture : Plant growth regulator

**1.3 Details of the supplier of the safety data sheet**

Company : Chemtura Manufacturing UK Limited Tenax Road, Trafford Park, Manchester, United Kingdom, M17 1WT. Customer Service : +44 161 875 3800

Prepared by mdsrequest@chemtura.com

Further information for the safety data sheet : mdsrequest@chemtura.com

**1.4 Emergency telephone number**

Emergency telephone number : +44 (0) 1235 239 670 (NCEC)

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

**2. Hazards identification****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.

**Classification (67/548/EEC, 1999/45/EC)**

Dangerous for the environment R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**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.

Supplemental Hazard Statements :

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

**2.3 Other hazards**

No information available.

**3. Composition/information on ingredients****3.2 Mixtures : Hazardous components**

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Isotridecyl alcohol ethoxylate	78330-21-9	Xi; R36/38	Eye Irrit. 2; H319 Skin Irrit. 2; H315	>= 10 - < 20
Alkylnaphthalene sulfonate, sodium salt		Xi; R36	Eye Irrit. 2; H319	>= 1 - < 10
potassium hydroxide	1310-58-3 215-181-3	C; R35 Xn; R22	Acute Tox. 4; H302 Skin Corr. 1A; H314	>= 1 - < 2
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	68081-81-2 268-356-1	R22 R38 R41	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 1 - < 5
1,2-dihydropyridazine-3,6-dione, potassium salt	51542-52-0 257-261-0			80.4

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**

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.

**5. Firefighting measures****5.1 Extinguishing media**Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>), Dry powder, Foam, Water mist

Unsuitable extinguishing media : Water spray

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

Specific hazards during firefighting : 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

Use water spray to cool unopened containers.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

**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 materials for containment and cleaning up**

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

**6.4 Reference to other sections**

Refer to protective measures listed in sections 7 and 8.

**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.

**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.

Stable under normal conditions.

Other data :

**7.3 Specific end use(s)**

Specific use(s) : Plant growth regulator

**8. Exposure controls/personal protection****8.1 Control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
potassium hydroxide (Solution)	1310-58-3	STEL	2 mg/m <sup>3</sup>	2005-04-06	GB EH40

**8.2 Exposure controls****Engineering measures**

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

**Personal protective equipment****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/m<sup>3</sup>.

Chemical resistant protective gloves

Safety glasses with side-shields conforming to EN166

Long sleeved clothing. Remove and wash contaminated clothing before re-use.

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.

**Hand protection :****Eye protection :****Skin and body protection :****Hygiene measures :****Environmental exposure controls**

General advice :

Do not allow material to contaminate ground water system.

Do not allow uncontrolled discharge of product into the environment.

**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

Flash point : &gt;= 100 °C

Ignition temperature : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

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

Auto-ignition temperature : not auto-flammable

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

Melting point/range : ca. 304 °C

Note: no data available

Vapour pressure : not applicable

Density : 0.5 - 0.8 g/cm<sup>3</sup>

Relative density : 0.5 - 0.8 at

Water solubility : soluble

Partition coefficient:

n- octanol/water: log Pow: no data available

Solubility in other solvents : Note: no data available

Viscosity, dynamic : Note: not applicable

Viscosity, kinematic : Note: not applicable

Relative vapour density : not applicable

Evaporation rate : no data available

**9.2 Other information**

Oxidising potential: Note: The substance or mixture is not classified as oxidizing.

**10. Stability and reactivity****10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

Stable under normal conditions.

**10.2 Chemical stability****10.3 Possibility of hazardous reactions**

Hazardous reactions : No dangerous reaction known under conditions of normal use.

**10.4 Conditions to avoid**

Conditions to avoid : Extremes of temperature and direct sunlight.

**10.5 Incompatible materials**

Materials to avoid : Strong acids and strong bases. Oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products : Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Thermal decomposition : Note: no data available

**11. Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Acute oral toxicity : LD50: 7,500 mg/kg Species: rat

Acute oral toxicity potassium hydroxide : LD50 Oral: 273 mg/kg Species: rat

1,2-dihydropyridazine-3,6- dione, potassium salt : LD50: &gt; 5,000 mg/kg Species: rat

Remarks: Maleic Hydrzide

LC50: &gt; 5 mg/l Exposure time: 4 h Species: rat

Acute inhalation toxicity : Exposure time: 4 h Species: rat

Acute inhalation toxicity 1,2-dihydropyridazine-3,6- dione, potassium salt : LC50: &gt; 4.03 mg/l Exposure time: 4 h Species: rat

Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

LD50: &gt; 2,000 mg/kg Species: rabbit

Acute dermal toxicity : Species: rabbit

Acute dermal toxicity 1,2-dihydropyridazine-3,6- dione, potassium salt : LD50: &gt; 5,000 mg/kg Species: rabbit

Remarks: Maleic Hydrzide

Skin corrosion/irritation

Skin irritation : Species: rabbit Result: Mild skin irritation

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

Skin irritation 1,2-dihydropyridazine-3,6- dione, potassium salt : Species: rabbit Result: Mild skin irritation

Remarks: Maleic Hydrzide

Serious eye damage/eye irritation

Eye irritation : Species: rabbit Result: No eye irritation

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

Eye irritation 1,2-dihydropyridazine-3,6- dione, potassium salt : Species: rabbit Result: No eye irritation

Remarks: Maleic Hydrzide

Respiratory or skin sensitisation

Sensitisation : Species: guinea pig Result: Did not cause sensitization on laboratory animals.

Sensitisation 1,2-dihydropyridazine-3,6- dione, potassium salt : Buehler Test Species: guinea pig

Classification: Does not cause skin sensitisation.

Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity 1,2-dihydropyridazine-3,6- dione, potassium salt :	Escherichia coli Salmonella typhimurium Bacillus subtilis	Result: negative Result: negative Result: positive Remarks: Maleic Hydrazide	NOEC: 4.3 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant) EC50: > 134.8 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant) NOEC: 13.5 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant)	Exposure time: 7 d Exposure time: 4 d Exposure time: 4 d
	Bacillus subtilis Chinese hamster ovary cells Chinese hamster ovary cells Mouse Lymphoma Mouse Lymphoma Human lymphocytes	Result: positive Result: positive Result: negative Result: negative Result: negative Result: negative	Toxicity to fish (Chronic toxicity): NOEC: 30 mg/l Species: Oncorhynchus mykiss (rainbow trout) LC50: > 88 mg/l Species: Oncorhynchus mykiss (rainbow trout)	Exposure time: 21 d Exposure time: 21 d
Genotoxicity in vivo 1,2-dihydropyridazine-3,6- dione, potassium salt :	Species: mouse Dose: 0, 0.5, 1.0 and 5.0 g/kg bw Species: mouse Dose: 0,0.02,0.2,1.3 and 7.5g/kg bw Species: mouse Dose: 0, 2,500 and 5,000 mg/kg bw Species: mouse Dose: 0, 2,500 and 5,000 mg/kg bw Species: mouse Dose: 0,110,551,800 and 1101mg/kg bw Species: Drosophila melanogaster Dose: 0, 0.4 and 1.0 %	Result: negative Result: negative Result: negative Result: negative Result: negative Result: negative	NOEC: 9.6 mg/l Species: Pimephales promelas (fathead minnow) Remarks: Maleic Hydrazide LOEC: > 9.6 mg/l Species: Pimephales promelas (fathead minnow) Remarks: Maleic Hydrazide	Exposure time: 32 d Exposure time: 32 d
<b>Mutagenicity Assessment</b> Remarks :	Based on available data, the classification criteria are not met.		Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): EC50: 110 mg/l Species: Daphnia magna (Water flea) NOEC: 0.95 mg/l Species: Daphnia magna (Water flea)	Exposure time: 21 d Exposure time: 21 d
<b>Carcinogenicity Assessment</b> Remarks :	Based on available data, the classification criteria are not met.		<b>12.2 Persistence and degradability</b> Biodegradability : <b>12.3 Bioaccumulative potential</b> Bioaccumulation :	Remarks: no data available Remarks: no data available
<b>Reproductive toxicity Assessment</b> Remarks :	Based on available data, the classification criteria are not met.		Mobility : <b>12.5 Results of PBT and vPvB assessment</b> 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.	Remarks: no data available
<b>Target Organ Systemic Toxicant - Single exposure</b> Remarks :	Based on available data, the classification criteria are not met.		<b>12.6 Other adverse effects</b> Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.	
<b>Target Organ Systemic Toxicant - Repeated exposure</b> 1,2-dihydropyridazine-3,6- dione, potassium salt :	Species: rat, male and female Dose: 30,100,300 and 1,000mg/kg bw/d NOEL: 1000 mg/kg bw/day Species: dog, male and female Dose: 750, 2,500, 7,500 & 25,000 ppm NOEL: 25,000 ppm (625 mg/kg bw/day) Method: OECD Test Guideline 409 Species: dog, male and female Dose: 750, 2,500 and 25,000 ppm NOEL: 750 ppm (25 and 29 mg/kg bw/day (M/F)) Species: rat, male and female Dose: 50, 100, 500 and 1,000 mg/m <sup>3</sup> NOEL: 500 mg/m <sup>3</sup> for males / >1,000 mg/m <sup>3</sup> for females Method: OECD Test Guideline 412 Species: rat, male and female Dose: 100,500&1,000 mg/kg bw/day NOEL: 1000 mg/kg bw/day Remarks: Based on available data, the classification criteria are not met.	Application Route: Oral Exposure time: 13 weeks () Maleic Hydrazide Exposure time: 13 weeks () Maleic Hydrazide Exposure time: (1 y) Maleic Hydrazide Exposure time: 28-day() Maleic Hydrazide Exposure time: (21 d) Maleic Hydrazide	<b>13. Disposal considerations</b> <b>13.1 Waste treatment methods</b> 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.	
<b>Mutagenicity Assessment</b> Remarks :	Based on available data, the classification criteria are not met.		<b>14. Transport information</b> ADR UN number : UN proper shipping name :  Transport hazard class(es) : Packing group : Classification Code : Hazard Identification Number : Labels : Tunnel restriction code : Environmentally hazardous : IATA UN number : Description of the goods :	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Isotridecyl alcohol ethoxylate, 1,2-dihydropyridazine-3,6-dione, potassium salt) 9 III M7 90 9 (E), full load, tank-container yes 3077 Environmentally hazardous substance, solid, n.o.s. (Isotridecyl alcohol ethoxylate, 1,2-dihydropyridazine-3,6-dione, potassium salt) 9 III 9 yes 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Isotridecyl alcohol ethoxylate, 1,2-dihydropyridazine-3,6-dione, potassium salt) 9 III 9 F-A S-F yes
<b>Toxicology Assessment</b> Further information :	no data available		<b>RID</b> UN number : Description of the goods :  Transport hazard class(es) : Packing group : Classification Code : Hazard Identification Number : Labels : Environmentally hazardous :	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Isotridecyl alcohol ethoxylate, 1,2-dihydropyridazine-3,6-dione, potassium salt) 9 III M7 90 9 yes
<b>12. Ecological information</b> <b>12.1 Toxicity</b> Toxicity to fish :	LC50: 130.8 mg/l Species: Oncorhynchus mykiss (rainbow trout) : NOEC: 111.3 mg/l Species: Oncorhynchus mykiss (rainbow trout)	Exposure time: 96 h Exposure time: 96 h	<b>15. Regulatory information</b> <b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b> 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). Major Accident Hazard Legislation : 96/82/EC Update: 2003 Directive 96/82/EC does not apply Water contaminating class (Germany) : WGK 1 slightly water endangering	
Toxicity to fish 1,2-dihydropyridazine-3,6- dione, potassium salt :	LC50: > 134.8 mg/l Species: Oncorhynchus mykiss (rainbow trout) static test Method: OECD Test Guideline 203 NOEC: > 134.8 mg/l Species: Oncorhynchus mykiss (rainbow trout) static test Method: OECD Test Guideline 203	Exposure time: 96 h Exposure time: 96 h	<b>15.2 Chemical Safety Assessment</b> <b>16. Other information</b> <b>Full text of R-phrases referred to under sections 2 and 3</b> R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <b>Full text of H-Statements referred to under sections 2 and 3.</b> 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. H411 Toxic to aquatic life with long lasting effects.	
Toxicity to daphnia and other aquatic invertebrates :	NOEC: 207.2 mg/l Species: Daphnia magna (Water flea) EC50: 244 mg/l Species: Daphnia magna (Water flea)	Exposure time: 48 h Exposure time: 48 h	<b>15.2 Chemical Safety Assessment</b> <b>16. Other information</b> <b>Full text of R-phrases referred to under sections 2 and 3</b> R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <b>Full text of H-Statements referred to under sections 2 and 3.</b> 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. H411 Toxic to aquatic life with long lasting effects.	
Toxicity to daphnia and other aquatic invertebrates 1,2-dihydropyridazine-3,6- dione, potassium salt :	EC50: 684.6 mg/l Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202 NOEC: 500.4 mg/l Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202	Exposure time: 48 h Exposure time: 48 h	<b>15.2 Chemical Safety Assessment</b> <b>16. Other information</b> <b>Full text of R-phrases referred to under sections 2 and 3</b> R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <b>Full text of H-Statements referred to under sections 2 and 3.</b> 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. H411 Toxic to aquatic life with long lasting effects.	
Toxicity to algae :	EC50: 445.2 mg/l Species: Pseudokirchneriella subcapitata NOEC: 179.6 mg/l Species: Pseudokirchneriella subcapitata EC50: 12.3 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant) NOEC: 3.2 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant) EC50: 54.4 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant) NOEC: 10.0 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant)	Exposure time: 72 h Exposure time: 72 h Exposure time: 7 d Exposure time: 7 d Exposure time: 4 d Exposure time: 4 d	<b>15.2 Chemical Safety Assessment</b> <b>16. Other information</b> <b>Full text of R-phrases referred to under sections 2 and 3</b> R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <b>Full text of H-Statements referred to under sections 2 and 3.</b> 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. H411 Toxic to aquatic life with long lasting effects.	
Toxicity to algae 1,2-dihydropyridazine-3,6- dione, potassium salt :	EC50: > 134.8 mg/l Species: Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 NOEC: > 134.8 mg/l Species: Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 EC50: > 134.8 mg/l Species: Anabaena flos-aquae (cyanobacterium) Method: OECD Test Guideline 201 NOEC: > 134.8 mg/l Species: Anabaena flos-aquae (cyanobacterium) Method: OECD Test Guideline 201 EC50: 64.3 mg/l Species: Myriophyllum aquaticum (aquatic macrophyte plant)	Exposure time: 72 h Exposure time: 72 h Exposure time: 72 h Exposure time: 72 h Exposure time: 72 h Exposure time: 72 h Exposure time: 7 d	<b>15.2 Chemical Safety Assessment</b> <b>16. Other information</b> <b>Full text of R-phrases referred to under sections 2 and 3</b> R22 Harmful if swallowed. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <b>Full text of H-Statements referred to under sections 2 and 3.</b> 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. H411 Toxic to aquatic life with long lasting effects.	

**Carechem24 International Worldwide Coverage - Chemtura Corporation - Emergency Phone Number**

**All European Countries +44 (0) 1235 239 670 (NCEC)**

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 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.