



According to Regulation (EC) No. 1907/2006

Version 1 Revision Date 06/08/2015

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Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name: Hyflux
Product Number(s): P4434 (1L)
P4429 (5L)

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

A selective post-emergence herbicide for the control of annual and perennial weeds.

1.3 Details of the supplier of the safety data sheet

Hygeia Chemicals Limited,
Carrowmoneash,
Oranmore,
Co. Galway
Tel: 091-794722 Fax: 091-794738 email: services@hygeia.ie

1.4 Emergency telephone number

National Poisons Information Centre (Tel: 01-8379964) (Fax: 01-8368476)

2. Hazards Identification

2.1 Classification of the mixture

Classification according to regulation (EC) No 1272/2008 (CLP)

Physical and Chemical Hazards

FLAMMABLE LIQUIDS Category 3 - H226

Human Health

Aspiration toxicity Category 1 - H304

Serious Eye Damage/Irritation Category 2 - H319

STOT - Single Exposure Category 3 - H336

Environment

Chronic aquatic toxicity Category 1 - H410

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 (CLP)



signal word

DANGER

hazard statements

H226 - Flammable liquid and vapor

H304 - May be fatal if swallowed and enters airways

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/ container in accordance with national regulation

EU Specific Hazard Statements

EUH066 - Repeated exposure may cause skin dryness or cracking

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
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3.2. MIXTURES

Chemical name	EC No	CAS-No	Weight %	Classification (Dir.67/548)	EU - GHS Substance Classification	REACH No.
Fluroxypyr 1-methylheptyl ester	279-752-9	81406-37-3	20 - 30	-	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	no data available
Hydrocarbons, C10-C13, aromatics	265-198-5	64742-94-5	50 - 60	-	Asp. Tox. 1 (H304)	no data available
calcium dodecylbenzene sulfonate	Present	26264-06-2	1 - 5	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	no data available
Butan-1-ol	Present	71-36-3	1 - 5	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Flam. Liq. 3 (H226) STOT SE 3 (H335) STOT SE 3 (H336) Eye Dam. 1 (H318)	no data available

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

General advice	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
Eye contact	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Seek immediate medical attention/advice
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes If symptoms persist, call a physician
Ingestion	If accidentally swallowed obtain immediate medical attention Do NOT induce vomiting Rinse mouth Drink plenty of water
Inhalation	Move to fresh air Seek immediate medical attention/advice Effects of overexposure: Causes headache, drowsiness or other effects to the central nervous system May cause irritation of respiratory tract

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

ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water spray, fog or alcohol-resistant foam Carbon dioxide (CO ₂) Foam Dry powder
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: Carbon oxides, Nitrogen oxides (NO_x)

5.3 Advice for Firefighters

Wear self-contained breathing apparatus and protective suit
This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas
Wear protective gloves/clothing and eye/face protection.
Avoid contact with skin, eyes and inhalation of vapors

6.2 Environmental Precautions

Prevent further leakage or spillage if safe to do so
Prevent product from entering drains
Local authorities should be advised if significant spillages cannot be contained

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
Remove all sources of ignition

7. Handling and Storage

7.1 Precautions for Safe Handling

Handling

Provide adequate ventilation
Wear personal protective equipment
Avoid contact with skin, eyes and clothing
Ensure that eyewash stations and safety showers are close to the workstation location

Hygiene Measures

Use only outdoors or in a well-ventilated area
When using do not drink.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in the original container/package in a cool well-ventilated place
Keep in a dry place
Avoid extreme high or low temperatures.
Keep away from heat and sources of ignition

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

http://limitvalue.ifa.dguv.de/Webform_gw.aspx

Chemical name	Eu	United Kingdom	France	Spain	Germany
Butan-1-ol		STEL: 50 ppm STEL: 154 mg/m ³ Skin	STEL: 50 ppm STEL: 150 mg/m ³	S* STEL: 50 ppm STEL: 154 mg/m ³	MAK: 100 ppm MAK: 310 mg/m ³ Ceiling / Peak: 100 ppm Ceiling / Peak: 310 mg/m ³ TWA: 100 ppm TWA: 310 mg/m ³
Component	Italy	Portugal	Netherlands	Finland	Denmark
Butan-1-ol 71-36-3 (1 - 5)		TWA: 20 ppm		TWA: 50 ppm TWA: 150 mg/m ³ STEL: 75 ppm STEL: 230 mg/m ³ Skin	Ceiling: 50 ppm Ceiling: 150 mg/m ³ Skin
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Butan-1-ol	STEL 200 ppm STEL 600 mg/m ³ TWA: 50 ppm TWA: 150 mg/m ³	STEL: 50 ppm STEL: 150 mg/m ³ TWA: 50 ppm TWA: 150 mg/m ³	STEL: 150 mg/m ³ TWA: 50 mg/m ³	Skin Ceiling: 25 ppm Ceiling: 75 mg/m ³	TWA: 20 ppm Skin

Chemical name	European Union	United Kingdom	France	Spain	Germany
Chemical name					10 mg/g urine end of shift 1-Butanol measured as mg/g Creatinine 2 mg/g urine before beginning of next shift 1-Butanol measured as mg/g Creatinine

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

appearance	Yellow	
Physical state	liquid	
	Emulsifiable concentrate	
Odor	Organic	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	5	CIPAC MT 75
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	51 °C	EEC A.9
flammability (solid, gas)	No information available	
Relative Density	0.99	EEC A3
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	450 °C	EC A.15
decomposition temperature	No information available	
viscosity	8.8-9.6 mPas	OECD 114
Oxidizing properties	Non oxidizing	
Explosive properties	According to the chemical structure no explosion reaction is expected.	

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

Extremes of temperature and direct sunlight
Keep away from heat, sparks and open flame. - No smoking

10.5 Incompatible Materials

Acids
Strong bases
Oxidizing agents.

10.6 Hazardous Decomposition Products

Carbon oxides
Nitrogen oxides (NOx)

11. Toxicological Information

11.1 Information on Toxicological Effects

Acute toxicity

Local effects

Inhalation There is no data available for this product.
Eye contact May cause irritation. (rabbit).
Skin contact No skin irritation. (rabbit).
Ingestion There is no data available for this product.

LD50 Oral > 2000 mg/kg (rat)

LD50 Dermal > 2000 mg/kg (rat)

LC50 Inhalation:

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
calcium dodecylbenzene sulfonate 26264-06-2	= 4 g/kg (Rat)		
Hydrocarbons, C10-C13, aromatics 64742-94-5	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Butan-1-ol 71-36-3			8000 ppm (Rat) 4 h
Fluroxypyr 1-methylheptyl ester 81406-37-3	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 1.0 mg/air/4h (rat)

Chronic toxicity

Skin Corrosion/Irritation No information available.

sensitization Did not cause sensitization.

Carcinogenic effects No information available

Mutagenic effects No information available

Reproductive effects No information available

STOT - Single Exposure No information available.

STOT - repeated exposure No information available.

12. Ecological Information

12.1 Toxicity

EC50/72h/algae = 0.27 mg/l

EC50/48h/daphnia = 23.4 mg/l

LC50/fish/96 h = 8.84 mg/l

12.2 Persistence and Degradability

No information available

12.3 Bioaccumulative Potential

No information available

Chemical name	Log Pow
Hydrocarbons, C10-C13, aromatics	2.9 - 6.1
Butan-1-ol	0.88

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

Waste from Residues / Unused Products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.
EWC waste disposal No	020108 - agrochemical waste containing dangerous substances.
OTHER INFORMATION	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

16. Other Information

Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapor

H304 - May be fatal if swallowed and enters

airways H315 - Causes skin irritation

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

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

EUH066 - Repeated exposure may cause skin dryness or cracking

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

Revision date 30-Jul-2015

Revision note Not applicable

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

Disclaimer

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 guidance for safe handling, use, processing, storage, transportation, disposal, release and is not to be considered a warranty of 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.

End of Safety Data Sheet