



BIOPOWER

Version 5 / GB
102000013441

1/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

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

1.1 Product identifier

Trade name BIOPOWER
Product code (UVP) 05815990

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

Use Adjuvant

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Limited
 230 Cambridge Science Park
 Milton Road
 Cambridge
 Cambridgeshire CB4 0WB
 United Kingdom

Telephone +44(0)1223 226500

Telefax +44(0)1223 426240

Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.

Emergency telephone no. 0800-220876 (UK 24 hr)
 +44(0)1635-563000 (Overseas 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 irritation: Category 2
H315 Causes skin irritation.

Eye irritation: Category 2
H319 Causes serious eye irritation.

Chronic aquatic toxicity: Category 3
H412 Harmful to aquatic life with long lasting effects.

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

Xi Irritant, R36
Xi Irritant, R38

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:

- Alkylethersulfate, sodium salt

**BIOPOWER**Version 5 / GB
102000013441

2/9

Revision Date: 11.09.2014
Print Date: 11.09.2014**Signal word:** Warning**Hazard statements**

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H412 Harmful to aquatic life with long lasting effects.
 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.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: 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**Soluble concentrate (SL)
Alkylethersulfate, sodium salt 276,5 g/l**Hazardous components**R-phrases according to EC directive 67/548/EEC
Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Conc. [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
Alkylethersulfate, sodium salt	68891-38-3 500-234-8	Xi; R38 Xi; R41	Eye Dam. 1, H318 Skin Irrit. 2, H315 Aquatic Chronic 3, H412	27.80

Further information

For the full text of the R-phrases/ Hazard 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.

**BIOPOWER**Version 5 / GB
102000013441

3/9

Revision Date: 11.09.2014

Print Date: 11.09.2014

Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off immediately with soap and plenty of 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	Do NOT induce vomiting. Rinse mouth. 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** In the event of fire the following may be released: Carbon monoxide (CO), Sulphur oxides**5.3 Advice for firefighters****Special protective equipment for fire-fighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures****Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.**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).



BIOPOWER

Version 5 / GB
102000013441

4/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

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.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

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

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

7.3 Specific end uses Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No control parameters known.

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.

**BIOPOWER**Version 5 / GB
102000013441

5/9

Revision Date: 11.09.2014

Print Date: 11.09.2014

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 6 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. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Form	Liquid, slightly turbid
Colour	colourless
Odour	slightly acidic
pH	4.0 - 7.0 at 100 % (23 °C)
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Density	ca. 1.03 g/cm ³ at 20 °C
Water solubility	miscible in all proportions
Partition coefficient: n-octanol/water	Alkylethersulfate, sodium salt: log Pow: 0.3
Viscosity, dynamic	<= 300 mPa.s at 20 °C
Surface tension	25.4 mN/m at 25 °C
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 dangerous reaction known under conditions of normal use.

**BIOPOWER**Version 5 / GB
102000013441

6/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

- 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** ATE > 2,000 mg/kg
Calculation method
ATE – acute toxicity estimate
- Acute inhalation toxicity** During intended and foreseen applications, no respirable aerosol is formed.
- Acute dermal toxicity** ATE > 2,000 mg/kg
Calculation method
ATE – acute toxicity estimate
- Skin irritation** Irritating to skin. (rabbit)
Information refers to the main component.
- Eye irritation** Irritating to eyes. (rabbit)
Test conducted with a similar formulation.
- Sensitisation** Non-sensitizing. (guinea pig)
OECD Test Guideline 406, Magnusson & Kligman test
Information refers to the main component.

Assessment repeated dose toxicity

Alkylethersulfate, sodium salt did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

Alkylethersulfate, sodium salt was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Alkylethersulfate, sodium salt was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Alkylethersulfate, sodium salt did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Alkylethersulfate, sodium salt did not cause developmental toxicity in rats and rabbits.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

- Toxicity to fish** LC50 (Brachidanio rerio (Zebra fish)) 7.1 mg/l
Exposure time: 96 h
Information refers to the main component.
- Toxicity to aquatic invertebrates** EC50 (Water flea (Daphnia magna)) 7.2 mg/l
Exposure time: 48 h

**BIOPOWER**Version 5 / GB
102000013441

7/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

Information refers to the main component.

Toxicity to aquatic plants NOEC (Scenedesmus subspicatus) 0.93 mg/l
Exposure time: 72 h
Information refers to the main component.
EC50 (Scenedesmus subspicatus) 27 mg/l
Exposure time: 72 h
Information refers to the main component.

12.2 Persistence and degradability

Biodegradability Alkylethersulfate, sodium salt:
rapidly biodegradable

12.3 Bioaccumulative potential

Bioaccumulation Alkylethersulfate, sodium salt:
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Alkylethersulfate, sodium salt: soluble in water

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Alkylethersulfate, sodium salt: 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 information 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 **020108** agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/UK 'Carriage' Regulations/RID/IMDG/IATA not classified as dangerous goods.



BIOPOWER

Version 5 / GB
102000013441

8/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

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

14.1 – 14.5 Not applicable.

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 73/78 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)

Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

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: III (Slightly hazardous)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of R-phrases mentioned in Section 3



BIOPOWER

Version 5 / GB
102000013441

9/9

Revision Date: 11.09.2014
Print Date: 11.09.2014

R38 Irritating to skin.
R41 Risk of serious damage to eyes.

Text of the hazard statements mentioned in Section 3

H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

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.
--