

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

1.1. Product identifier

Product name: KERNEL

Product code: 4515

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

Use of substance / mixture: Can be used as herbicide only.

1.3. Details of the supplier of the safety data sheet

Company name: Headland Agrochemicals

Rectors Lane

Pentre

Flintshire

CH5 2DH

United Kingdom

Tel: +44(0)1244 537370

Fax: +44(0)1244 532097

Email: enquiry@headlandgroup.com

1.4. Emergency telephone number

Emergency tel: +44(0)1244 537370

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: N: R51/53

Classification under CLP: * Aquatic Acute 1: H400; Aquatic Chronic 2: H411; -: EUH401

Most important adverse effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Label elements under CLP:

Hazard statements: * H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

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

Signal words: * Warning

Hazard pictograms: * GHS09: Environmental

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Precautionary statements: * P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container to hazardous or special waste collection point.

Label elements under CHIP:

Hazard symbols: Dangerous for the environment.



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

Safety phrases: S2: Keep out of the reach of children.

S13: Keep away from food, drink and animal feeding stuffs.

S46: If swallowed, seek medical advice immediately and show this container or label.

S57: Use appropriate container to avoid environmental contamination.

S60: This material and its container must be disposed of as hazardous waste.

S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

Precautionary phrases: To avoid risks to man and the environment, comply with the instructions for use.

2.3. Other hazards

PBT: This product is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

GLYPHOSATE ISOPROPYLAMINE SALT

EINECS	CAS	CHIP Classification	CLP Classification	Percent
254-056-8	38641-94-0	N: R51/53	Aquatic Chronic 2: H411	50-70%

TALLOW ALKYLAMINE ETHOXYLATE

-	61791-26-2	Xn: R22; Xi: R41; N: R50	Acute Tox. 4: H302; Eye Dam. 1: H318; Aquatic Acute 1: H400	1-5%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Consult a doctor if irritation develops.

Eye contact: Bathe the eye with running water for 15 minutes. Remove contact lenses, if present, after the first few minutes, then continue rinsing. Transfer to hospital for specialist examination.

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Ingestion: Do not induce vomiting. Wash out mouth with water. Drink several glasses of water or milk. If vomiting occurs, rinse mouth and drink fluids again. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: May cause gastrointestinal tract irritation. No significant adverse effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with nausea, vomiting and diarrhoea. Ingestion of large quantities of a similar product has been reported to result in hypotension and lung oedema.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Immediate medical attention is required in case of ingestion or eye contact. The irritating effects of this product can be treated as usual against effects of acids or acid fumes. Possible mucosal damage may contraindicate the use of gastric lavage.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes. The essential breakdown products are carbon monoxide, carbon dioxide, phosphorus pentoxide and nitrogen oxides.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes. Contaminated fire extinguishing water should not be discharged into drains, if preventable.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. In the case of large spills, (1 ton or more) alert the appropriate authorities.

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6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding. Wash waters must be prevented from entering surface water drains. Accidental release into water courses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Surface water drains within close vicinity of the spill should be covered. Spills on the floor or other impervious surface should be absorbed onto an absorptive material such as hydrated lime, universal binder, or other absorbent clays. Collect the contaminated absorbent in suitable containers. Rinse the area with water and industrial detergent. Absorb wash liquid onto absorbent and transfer to suitable containers. Spills which soak into the ground should be dug up and placed in suitable containers. Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal. Refer to section 13 of SDS for suitable method of disposal.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Material should be handled by mechanical means as much as possible. Ensure there is sufficient ventilation of the area. Exhaust gases should be filtered or treated otherwise. For its use as a pesticide, look for precautions and personal protective measures on the officially approved label or other official guidance or policy in force. If these are lacking, see section 8 of this SDS. Remove contaminated clothing immediately after handling, then wash thoroughly and put on clean clothes. Collect all wash water and dispose of as hazardous waste.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor. The room should only be used for storage of chemicals, and without access to unauthorised persons or children. Food, drink, feed and seed should not be present. A hand wash station should be available.

Suitable packaging: The product, or its spray solutions, should be mixed, stored or applied using only stainless steel, aluminium, fiberglass, plastic or plastic-lined containers. See subsection 10.5.

7.3. Specific end use(s)

Specific end use(s): This product is a registered pesticide, which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

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Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

8.1. DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping system non-hazardous before opening.

Respiratory protection: The product is not likely to present an airborne exposure concern during normal handling, but in the event of a discharge of the material which produces a heavy vapour or mist, workers should put on officially approved face mask or respiratory protection: Respiratory protection with universal filter type, including particle filter.

Hand protection: Wear heavy duty natural rubber gloves. The breakthrough time of these gloves for the product is unknown, but it is expected that they will give adequate protection. Replace gloves frequently and limit work done manually.

Eye protection: Face-shield. Ensure eye bath is to hand.

Skin protection: Waterproof pants and apron of chemical resistant material or coveralls with polyethylene (PE) coating will be sufficient for short time exposure. Coveralls must be discarded after use if contaminated. In cases of prolonged exposure, barrier laminate coveralls may be required.

Environmental: Refer to specific Member State legislation for requirements under Community environmental legislation.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Yellow-brown

Odour: Slight amine-like odour

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible

Viscosity: 79.3 mPa.s at 25°C; 29.1 mPa.s at 45°C

Boiling point/range°C: 113

Melting point/range°C: <0

Flash point°C: >120

Part.coeff. n-octanol/water: See section 12.3

Relative density: 1.204 g/ml at 20°C

pH: 4.93 (1% soln, 25°C)

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9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: The product can react with caustic (basic) materials in an acid-base chemical neutralisation reaction which may be hazardous because of heat release.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Do not mix, store or apply this product or spray solutions of this product in galvanised or unlined steel containers or spray tanks. Stainless steel may be used. This product or its spray solutions can react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture with air. This gas mixture could flash or explode if ignited, causing serious personal injury.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes. See subsection 5.2.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
DUST/MIST	RAT	4H LC50	>4.86	mg/l
DERMAL	RAT	LD50	>2000	mg/kg
ORAL	RAT	LD50	>5000	mg/kg

Hazardous ingredients:

GLYPHOSATE ISOPROPYLAMINE SALT

DERMAL	RAT	LD50	>4000	mg/kg
DUST/MIST	RAT	4H LC50	>4.72	mg/l

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ORAL	RAT	LD50	>2000	mg/kg
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TALLOW ALKYLAMINE ETHOXYLATE

ORAL	RAT	LD50	300 - 2000	mg/kg
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Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: May cause gastrointestinal tract irritation. No significant adverse effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with nausea, vomiting and diarrhoea. Ingestion of large quantities of a similar product has been reported to result in hypotension and lung oedema.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: No data available.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
ACTIVATED SLUDGE	IC50	>100	mg/kg
DAPHNIDS (<i>Daphnia magna</i>)	21d NOEC	1.5	mg/l
DAPHNIDS (<i>Daphnia magna</i>)	48H EC50	21.6	mg/l
GREEN ALGAE (<i>Selenastrum capricornutum</i>)	72H IC50	2.0	mg/l
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	21d NOEC	0.43 - 0.81	mg/l
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	96H LC50	18.6	mg/l
DUCKWEED (<i>Lemna gibba</i>)	7d EC50	27	mg/l
EARTHWORMS (<i>Eisenia fetida</i>)	14d LC50	>1000	mg/kg dry soil
JAPANESE QUAIL (<i>Coturnix japonica</i>)	LD50	1900	mg/kg
HONEYBEES (<i>Apis mellifera</i>)	48H LD50	>359 (oral)	µg/bee

12.2. Persistence and degradability

Persistence and degradability: Glyphosate is not readily biodegradable. It undergoes slow degradation in the environment and in waste water treatment plants. No adverse effects are found at concentrations up to 100 mg/l in waste water treatment plants. Degradation is mainly microbiological and aerobic, but anaerobic degradation does also occur. Degradation half-lives in the environment vary much with the circumstances, but are usually around 3 - 30 days in aerobic soil and water.

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12.3. Bioaccumulative potential

Bioaccumulative potential: Glyphosate: log Kow = -3.3. Glyphosate is not expected to bioaccumulate. In several studies on bioaccumulation of glyphosate, both in marine and freshwater systems, only low bioaccumulation factors were found.

12.4. Mobility in soil

Mobility: In the environment glyphosate is not mobile, but is rapidly deactivated by adsorption to clay particles. Glyphosate binds strongly to soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Waste that cannot be reused or chemically reprocessed can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Disposal of packaging: Triple rinse (or equivalent) and offer for recycling or reconditioning. Do not discharge cleaning water to sewer systems. Alternatively, packaging can be delivered to a licensed service for disposal of hazardous waste. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(GLYPHOSATE ISOPROPYLAMINE SALT)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

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14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: Do not discharge to the environment.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk: The product is not transported in bulk tankers.

Section 15: Regulatory information

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

Specific regulations: This product is a Seveso category/named substance in Annex I of Council Directive 96/82/EC. All ingredients in this product are covered by EU chemical legislation. Product Registration Number: MAPP 10993.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

H302: Harmful if swallowed.

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

R22: Harmful if swallowed.

R41: Risk of serious damage to eyes.

R50: Very toxic to aquatic organisms.

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

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.