1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: 2,4-DB NA 400 G/L AI
Product code: W402A
Company name: Nufarm UK Limited
   Wyke Lane
   Wyke
   Bradford
   West Yorkshire
   BD12 9EJ
   UK
   Tel: +44(0)1274 691234 (24hr)
   Fax: +44(0)1274 691176
   Email: msds@uk.nufarm.com

2. HAZARDS IDENTIFICATION

Main hazards: Harmful if swallowed. Risk of serious damage to eyes. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients: 4-(2,4-DICHLOROPHENOXY) BUTYRIC ACID, SODIUM SALT 37.700%
   [Xn] R22; [Xi] R41; [N] R51/53

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: No symptoms.
Eye contact: There may be irritation and redness. The eyes may water profusely.
Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.
Inhalation: No symptoms.

4. FIRST AID MEASURES (ACTION)

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.
Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.
Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.
Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Extinguish with carbon dioxide, dry chemical, foam or waterspray. Use water spray to cool containers.
Exposure hazards: In combustion emits toxic fumes.
Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. 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.

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. HANDLING AND STORAGE

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid

Colour: Dark brown

Odour: Phenolic

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Soluble

Viscosity value: 16.9mPas

Boiling point/range°C: >100

Flammability limits %: lower: Not Explosive

upper: Not Flammable

Flash point°C: >100

Part.coeff. n-octanol/water: 1.35 (DB)

Autoflammability°C: >400

Relative density: 1.175-1.205

pH: 9.0-11.0

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Heat.

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases.

[cont...]
11. TOXICOLOGICAL INFORMATION

Acute toxicity: 2,4-DB NA 400 G/L AI
ORL RAT LD50 >500 mg/kg
SKN RAT LD50 >2000 mg/kg

Routes of exposure: Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

12. ECOLOGICAL INFORMATION

Ecotoxicity: 2,4-DB NA 400 G/L AI
ALGAE 72H IC50 23.2 mg/l
FISH RAINBOW TROUT 96H LC50 17.8 mg/l

Hazardous ingredients: 4-(2,4-DICHLOROPHENOXY) BUTYRIC ACID, SODIUM SALT

Mobility: limited mobility in the soil column

Persistence and degradability: Rapidly biodegradable.

Bioaccumulative potential: Potential for bioaccumulation is low based on log Pow

Other adverse effects: Toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

ADR / RID

UN no: 3082
ADR Class: 9
Packing group: III
Classification code: M6
Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(4-(2,4-DICHLOROPHENOXY) BUTYRIC ACID, SODIUM SALT)
Labelling: 9
Hazard ID no: 90

IMDG / IMO

UN no: 3082
Class: 9
Packing group: III
EmS: F-A,S-F
Marine pollutant: YES
Labelling: 9
IATA / ICAO

UN no: 3082
Class: 9
Packing group: III
Packing instructions: 914
Labelling: 9

15. REGULATORY INFORMATION

Hazard symbols: Harmful.
   Dangerous for the environment.

Risk phrases: R22: Harmful if swallowed.
   R41: Risk of serious damage to eyes.
   R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
   S29: Do not empty into drains.
   S39: Wear eye / face protection.
   S46: If swallowed, seek medical advice immediately and show this container or label.
   S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

Haz. ingredients (label): 4-(2,4-DICHLOROPHENOXY) BUTYRIC ACID, SODIUM SALT

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Other information: This safety data sheet is prepared in accordance with Regulation (EC) No 1907/2006.

Risk phrases used in s.3: R22: Harmful if swallowed.
   R41: Risk of serious damage to eyes.
   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.