AGRIA S.A. 4009 Plovdiv BULGARIA	**SAFETY DATA SHEET** **According to Annex II of Regulation (EC) № 1907/2006 and Regulation (EC) № 1272/2008 [CLP]** **PIRATE**	**Issue date:** 01.08.2022 **Edition №** 4 **Date of edition:** *12.09.2024*

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

1.1. Product identifier

Name of the substance/mixture : 2,4-D acid 600 g/l SL as 2,4-D dimethylammonium
Other means of identification
UFI : 6C61-X0HJ-M001-JKDG
Trade name : PIRATE

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

Identified uses : Crop protection product, herbicide
Uses advised against : Not to be applied outside the scope of the aforementioned uses.

1.3. Details of the supplier of the safety data sheet

Manufacturer/ Supplier : AGRIA S.A.
Street/ Zip Code : Asenovgradsko shose, 4009 Plovdiv
Phone : 032 273 500, the phone number is available only during office hours
Fax : + 359 32 63 83 77
E-mail : agria@agria.bg

1.4. Emergency telephone number : National Toxicology Center, Hospital for Active Medical Treatment and Emergency Medicine “N.I.Pirogov” Emergency number/ fax: +359 2 9154 233

E-mail : poison_centre@mail.orbitel.bg
Available : 24/7
Language telephone line : Bulgarian

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP) : Acute Tox. 4; H302
Skin Sens. 1; H317
Eye Dam. 1; H318
Aquatic Chronic 2; H411

2.2. Label elements

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

Hazard pictograms :



Signal words : **DANGER**

Hazardous components which must be listed on the label : 2,4-D dimethylammonium salt

Hazard statements :
H302 – Harmful if swallowed.
H317 – May cause an allergic skin reaction.
H318 – Causes serious eye damage.
H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention

P264 – Wash your hands thoroughly after handling.
P273 – Avoid release to the environment.
P280 – Wear protective gloves/ eye protection/ face protection.

Response

P301 + P312 – *IF SWALLOWED:* call a POISON CENTER or doctor/ physician. If you feel unwell.
P302 + P352 – *IF ON SKIN:* Wash with plenty of soap and water.
P305 + P351 + P338 – *IF IN EYES:* Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391 – Collect spillage.

Disposal

P501 – Dispose of contents/ container in accordance with current regulations on hazardous waste.

Additional Precautionary Statements :
EUH208 – Contains dimethylammonium 2,4-dichloro-phenoxy-acetate. May produce an allergic reaction.
EUH401 – To avoid risks to human health and the environment, comply with the instructions for use.

Specific Precautionary Statements according to Regulation (EU) 547/2011 :
SP1 – Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.
SPe3 – To protect aquatic organisms and non-target arthropods respect an unsprayed buffer zone of 15m to surface water bodies.

2.3. Other hazards :
The product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties.
The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria, or the criteria for vPvB (very persistent/very bioaccumulative) according to Regulation (EC) No. 1907/2006, Annex XIII.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1. Substances : Refers to a mixture

3.2. Mixtures
Description of the mixture

Name	CAS №	EC №	Index №	REACH Reg. №	Concentration (% w/v)	Classification according to Regulation (EC) № 1272/2008 (CLP)	SCL, M-factor, ATE

2,4-D dimethylamine salt	2008-39-1	217-915-8	-	-	72.2 ± 2.5 (60 ± 2.5 as 2,4 D)	Acute Tox. 4; H302 Skin Sens. 1; H317 Eye Dam. 1; H318 Aquatic Chronic 2; H411	-

For full text of Hazard categories and Hazard statements: see SECTION 16 (v).

4. FIRST AID MEASURES

4.1. Description of first aid measures : In case of poisoning, show container, label and/or safety data sheet to physician.

Following inhalation : Immediately move to fresh air and rest. Seek medical advice immediately if breathing is difficult.

Following skin contact : In case of contact, immediately wash affected area with soap and water. Seek medical advice if necessary. Wash contaminated clothing before reuse.

Following eye contact : Hold eyes open and rinse with large quantity of water for at least 15 minutes. Seek medical advice if irritation persists.

Following ingestion : Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting.

Self-protection of the first-aiders : Use PPE

4.2. Most important symptoms and effects, both acute and delayed : Information on known effects and symptoms is included in the labelling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Further symptoms and / or effects are not known so far.

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

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media : Dry powder, carbon dioxide fire extinguisher. In case of large fire use soft stream water fog, foam extinguisher.

Unsuitable extinguishing media : Water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : In case of fire, along with other products of combustion, the smoke contains toxic gases – sulphur dioxide, hydrogen sulphide, nitrogen oxides and carbon oxides. Do not inhale combustion gases.

5.3. Advice for firefighters : Full protective clothing and self-contained breathing apparatus.

5.4. Further information : Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel	:	Keep unnecessary personnel away.
Protective equipment	:	Wear appropriate protective equipment (including personal protective equipment, listed in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing
Emergency procedures	:	Remove sources of ignition, provide adequate ventilation, control dust, consult an expert.
6.1.2. For emergency responders	:	Eliminate all ignition sources (flame or spark). Provide local and general exhaust ventilation. Use protective clothing and gloves, respiratory mask with an effective particulate filter, chemical goggles for eye protection.
6.2. Environmental precautions	:	In case of accidental release take precautions to protect the surface and underground water, soil and sewage from contamination. Remove the sources of heat and flames. In case of spill into the sewage, surface water, ground water or soil notify the competent authorities immediately.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment	:	Do not dispose the product, packaging and/ or contaminated materials into the sewage systems, water sources or water bodies. Store the container at an appropriate place for further treatment or disposal according to the national legislation.
6.3.2. For cleaning		Absorb with an inert material – sand, zeolite. Collect into an appropriate, labelled tightly sealed waste container.
6.3.3. Other information	:	Not available
6.4. Reference to other sections	:	Wear the personal protective equipment specified in section 8. The collected product, packaging and/ or contaminated materials should be treated as a waste according to section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautionary measures	:	Use process enclosures, local exhaust ventilation and other suitable engineering controls to keep airborne levels below recommended exposure limits.
Measures to prevent fire	:	If user operations generate aerosol, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. (See section 8).
Measures to prevent aerosol and dust	:	Regularly clean the premises and facilities wearing personal protective equipment and using professional fire-safe cleaning tools. Keep within the workspace only the quantities necessary for the normal working process. Containers/ packaging must not be left open. Keep away from sources of ignition (open flames, sparkles).
Measures for environmental protection	:	No available information

Advice on general occupational hygiene	:	Do not eat, drink or smoke when handling the product. In case of contamination change the work clothing. Avoid inhalation, ingestion and contact with eyes and skin. Do not handle this product without wearing the recommended personal protective clothing and equipment.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions	:	Keep in cool, dry, well-ventilated place far from sources of ignition. Avoid storage at temperatures below 0 ^{0}C and over 35 ^{0}C. Prevent the generation of static electricity. Keep out of reach of children.
Packing materials	:	Keep in unopened original packing.
Requirements for storage rooms and vessels	:	Keep away from: - Medicinal products, food, forage, fertilizers, fungicides, insecticides and seed - Radioactive substances, explosive substances Keep away from direct heat, open flames and direct sunlight. Isolate from incompatible substances such as strong basic, acidic or oxidizing materials.
Class of storage	:	Not available information
Additional information on storage conditions	:	Not available information

7.3. Specific end use(s)

Recommendations	:	For the relevant identified use(s) listed in Section 1, the advice mentioned in this section 7 is to be observed. See product label/leaflet for end use instructions.
Solutions specific to the industrial sector	:	Not available information

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values in air according to national (Bulgarian) legislation

Name	CAS №/ EC №	Occupational exposure limit values in air for the chemical substances	Legal basis
2,4-D dimethylamine salt	2008-39-1/217-915-8	-	Ordinance No. 13/2003 on the protection of workers from risks related to exposure to chemical agents at work, last amendment from 4.06.2021. (Government Gazette No. 47)

Occupational exposure limit values in air according to EU legislation

Name	CAS №/ EC №	Occupational exposure limit values in air for the chemical substances	Legal basis
2,4-D dimethylamine salt	2008-39-1/217-915-8	-	COMMISSION DIRECTIVE (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU

Consult the relevant national limit values currently applicable in the EU Member State/ Non-EU country in which this safety data sheet is being provided.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Structural, organizational and technical measures : Ensure adequate local and overall ventilation in the workplace

8.2.2. Individual protection measures, such as personal protective equipment

Respiratory protection :



In case of mist or aerosol formation use respirator with an approved filter. Half mask with a particle filter FFP2 (EN 149).

Skin protection :



In case of prolonged and repeated exposure
Wear body-covering chemical resistant protective clothing.

Eye protection :



Use safety glasses with side shields (according to EN 166).

Hand protection :



In case of short-term exposure:
Single-use vinyl gloves.
In case of prolonged or frequently repeated exposure
Use of nitrile-rubber gloves for multiple use with accordance with EN 374. Protection class 5 or higher.
Breakthrough time >240 min. Thickness > 0.4 mm.
If wearing up change the gloves.
Replace gloves when worn.

Thermal hazards : No available information

8.2.3. Environmental exposure controls : Emissions from the ventilation system and working equipment should be checked for conformity with environment safety legislations

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

(a) Physical state	:	Liquid
(b) Colour	:	Yellow to brown liquid
(c) Odour	:	No available information
(d) Melting point/ freezing point	:	< 0 ºC
(e) Boiling point or initial boiling point and boiling range	:	No available information
(f) Flammability	:	No available information
(g) Lower and upper explosion limit	:	No available information
(h) Flash point	:	No available information
(i) Auto – ignition temperature	:	No available information
(j) Decomposition temperature	:	No available information
(k) pH	:	7.0 ÷ 9.0 (1% solution)
(l) Kinematic viscosity	:	No available information
(m) Solubility	:	No available information
(n) Partition coefficient n – octanol/ water (logarithmic value)	:	No available information
(o) Vapour pressure	:	No available information
(p) Density and/ or relative density	:	1.20 ± 0.05 g/cm^3
(q) Relative vapour density	:	No available information
(r) Particle characteristics	:	Not applicable

9.2. Other information

9.2.1 Information with regard to physical hazard classes	:	According to available data, classification criteria for physical hazards are not met
a) Corrosive to metals	:	Not corrosive
b) Explosive properties	:	Not explosive
c) Oxidizing properties	:	Not oxidizing
9.2.2 Other safety characteristics	:	No available information

10. STABILITY AND REACTIVITY

10.1. Reactivity	:	No hazardous reactions when stored and handled according to instructions.
10.2. Chemical stability	:	Stable under normal conditions.
10.3. Possibility of hazardous reactions	:	Not known
10.4. Conditions to avoid	:	Avoid storage at temperature below 0 ºC and above 35°C in a confined place. Prevent heating of the material to avoid thermal decomposition.
10.5. Incompatible materials	:	Avoid contact with strong oxidants and strong acids and bases. Decomposes under alkaline and acidic conditions.
10.6. Hazardous decomposition products	:	See section 5

11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity effects

Acute oral toxicity, rats	:	LD_{50} > 639 mg/kg b.w. (for 2,4-D dimethylammonium)
Acute dermal toxicity, rats	:	LD_{50} = 1829 mg/kg b.w. (for 2,4-D dimethylammonium)
Acute inhalation toxicity, rats	:	No available information

Skin corrosion/ irritation	:	Based on available data, the classification criteria are not met
Serious eye damage/ irritation	:	Classified as eye damage, category of danger 1. Causes serious eye damage.
Respiratory or skin sensitization	:	Classified as skin sensitizer, category of danger 1. May cause an allergic skin reaction.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met
Carcinogenicity	:	Based on available data, the classification criteria are not met
Reproductive toxicity	:	Based on available data, the classification criteria are not met
STOT – single exposure	:	Based on available data, the classification criteria are not met
STOT – repeated exposure	:	Based on available data, the classification criteria are not met
Aspiration hazards	:	Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties	:	Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties.
11.2.2. Information of other hazards	:	Not available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Waterflea (*Daphnia magna*)	:	EC_{50} > 100 mg/l (48 h) for 2,4-D dimethylammonium
Algae *(Pseudokirchneriella subcapitata)*	:	EC_{50} > 60.7 mg/l (72 h) for 2,4-D dimethylammonium
Fish *(Pimephales promelas)*	:	LC_{50} > 495 mg/l (96 h) for 2,4-D dimethylammonium NOEC = 17.1 mg/l (21 d) for 2,4-D dimethylammonium
Birds *(Anas platyrhynchos)*	:	LD_{50} > 5620 mg/kg for 2,4-D dimethylammonium
Honeybees, oral *(Apis mellifera)*	:	LD_{50} = 94 µg/bee (48 h) for 2,4-D dimethylammonium
Honeybees, contact *(Apis mellifera)*	:	LD_{50} > 100 µg/bee (48 h) for 2,4-D dimethylammonium
Earthworms *(Eisenia foetida)*	:	LC_{50} = 350 mg/kg (14 d) for 2,4-D dimethylammonium NOEC = 62.5 mg/kg (14 d) for 2,4-D dimethylammonium
12.2. Persistence and degradability	:	No available information
12.3. Bioaccumulative potential	:	No available information
12.4. Mobility in soil	:	No available information

12.5. Results of PBT and vPvB assessment : The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria, or the criteria for vPvB (very persistent/very bioaccumulative) according to Regulation (EC) No. 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties : The product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties.

12.7. Other adverse effects : Ecotoxicity assessment:
Toxic to aquatic life with long lasting effects.

12.8. Additional information : No additional information

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Disposal of product/packaging : **Recommended treatment method:** burning in appropriately licensed incinerators.
Collection of small product quantities:
Store in suitable waste containers.

Waste code, packaging : 07 04 13* solid waste, containing dangerous substances
07 04 01* aqueous washing liquid and mother liquors
15 01 10* packaging containing residues of or contaminated by dangerous substances

13.1.2. Information related to waste treatment : **Disposal must be carried out** in accordance with the provisions of the national legislation, in an environmentally safe manner.

13.1.3. Information related to disposal by discharge into the sewage system : Do not dispose into the sewage. Do not pollute natural water sources. Remove washing waters used for cleaning the affected areas.

13.1.4. Other disposal recommendations : The container should be clearly labelled, with content description, danger indication symbols, H- and P-statements. Store in well-ventilated areas, until deposit to a licensed waste disposal company. The water used for contaminated surface washing should be collected for further treatment.
Do not reuse the empty containers for any other purpose.

14. TRANSPORT INFORMATION

14.1. UN number or ID number
ADR; RID; AND; IMDG; IATA/ICAO : 3082

14.2. UN proper shipping name
ADR; RID; AND; IMDG; IATA/ICAO : Environmentally hazardous substance, liquid, n.o.s. (2,4-D dimethylammonium)

14.3. Transport hazard class(es)
ADR; RID; AND; IMDG; IATA/ICAO : 9
Marking :



14.4. Packing group
ADR; RID; AND; IMDG; IATA/ICAO : III

14.5. Environmental hazards

ADR; RID; AND; IMDG; IATA/ICAO : **yes**

IMDG Marine pollutant : **yes**

14.6. Special precautions for user : See sections 6-8

14.7. Maritime transport in bulk according to IMO instruments : Maritime transport in bulk is not intended.

15. REGULATORY INFORMATION

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

EU Legislations:

EC Regulation 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products and repealing Directives 79/117/EEC and 91/414/EEC, including amendments

Applicable

REGULATION (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labelling and packing of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006, including amendments.

Applicable

REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemical Agency, amending Directive 1999/45/EC and repealing Council regulation (EEC) No 793/93 and Commission regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

No restrictions

COMMISSION REGULATION (EU) No 547/2011 of 8 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards labelling requirements for plant protection products

Applicable

COMMISSION DIRECTIVE (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU

Applicable

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

This product is classified under the Seveso III Directive

Seveso III Directive
E2: Hazardous to the aquatic environment – Chronic 2

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Applicable

National Legislation:

Ordinance on prevention of major accidents involving hazardous substances and limiting their consequences.
Applicable

Ordinance for authorization of plant protection products.
Applicable

Ordinance on procedures for labelling of plant protection products.
Applicable

15.2. Chemical safety assessment : The chemical safety assessment has been carried out for the mixture.

16. OTHER INFORMATION

(i) Indication of changes

The information in this safety data sheet was changed in the following sections:
1.4. Emergency telephone number

(ii) Abbreviation and acronyms

EC – European community; CLP - Classification, Labelling and Packaging of substances and mixtures; PBT - Persistent, Bioaccumulative and Toxic; vPvB - very Persistent and very Bioaccumulative; EU – European Union; CAS - Chemical Abstract Service; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; SCL - Specific concentration limits; M-factor – Multiplying factor; ATE - Acute Toxicity Estimate; PPE - Personal protective equipment, FFP2 - Filtering face piece 2; EN - European Standards.; pH - potential of hydrogen; LD50 – Lethal dose 50; LC50 – Lethal concentration 50; EC50 - Half maximal effective concentration; NOEC - No Observed Effect Concentration; DT50 - time required for the concentration to decline to half of the initial value; BCF – bioconcentration factor; UN – United nations; ADR - The European Agreement concerning the International Carriage of Dangerous Goods by Road; RID - The European Agreement concerning the International Carriage of Dangerous Goods by Rail.; ADN - The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways; IMDG - International Maritime Dangerous Goods Code; IATA - The International Air Transport Association; ICAO - The International Civil Aviation Organization; N.O.S. - Not otherwise specified; IMO - The International Maritime Organization; ECHA - The European Chemicals Agency

(iii) Key literature references and sources for data
ECHA Guidance on the compilation of safety data sheets (version 4.0, December 2020)

(iv) Classification and procedure used to derive the classification for mixtures to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) № 1272/2008	Classification procedure
Acute Tox. 4; H302	On basis of calculation method

Skin Sens. 1; H317	On basis of calculation method
Eye Dam. 1; H318	On basis of calculation method
Aquatic Chronic 2; H411	On basis of calculation method

(v) Relevant H – statements (number and full text as referred to SECTION 3)

According to Regulation (EC) №1272/2008

Acute Tox. 4 – Acute toxicity, category of danger 4; **H302** – Harmful if swallowed.
Skin Sens. 1 – Skin sensitisation, category of danger 1; **H317** – May cause an allergic skin reaction.
Eye Dam. 1 – Serious eye damage, category of danger 1; **H318** – Causes serious eye damage.
Aquatic Chronic 2 – Hazardous to the aquatic environment – chronic, category of danger 2; **H411** – Toxic to aquatic life with long lasting effects.

(vi) Training advice

General occupational hygiene training recommended

(vii) Further information

THE INFORMATION PRESENTED IN THIS SAFETY DATA SHEET IS BASED ON OUR KNOWLEDGE OF THE PRODUCT AT THE DATE OF ISSUE AND IS INTENDED TO PROVIDE ONLY GENERAL HEALTH AND SAFETY GUIDANCE.
THIS SAFETY DATA SHEET COMPLEMENTS THE TECHNICAL SPECIFICATION/ LABEL/ LEAFLET OF THE PRODUCT BUT DOES NOT REPLACE THEM.
THE USERS OF THIS PRODUCT SHOULD MAKE THEIR OWN ASSESSMENT OF ITS SUITABILITY FOR THE INTENDED PURPOSES PRIOR TO USE.
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 OR OTHER AVAILABLE TECHNICAL USAGE LITERATURE.