ADAGA

SAFETY DATA SHEET

ADAGA FORTUS 3-0-18

According to Regulation (EC) No 1907/2006 (REACH), (EC) No 1272/2008 (CLP)

Revision Date: -
Issue Date: 12.09.2024

Revision:
Form No:

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

1.1. Product identifier

Product name ADAGA FORTUS 3-0-18

Product identifier Fertilizer Solution

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

Identified uses Fertilizer solution

1.3. Details of the supplier of the safety data sheet

Company ADAGA SAĞLIK KİMYA SANAYİ A.Ş.
Altıayak Mh. 8525 Sk. No:22/F Kepez/Antalya
Tel: 0(242) 340 00 33 www.adaga.com.tr

Contact Person Chemical Engineer Nazlı Kılıç (nazli@nameconsulting.com.tr)

1.4. Emergency telephone number

Contact the national poison counseling center.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1 Hazard Classification (EC) No 1272/2008
This product is not classified as hazardous according to regulation (EC) 1272/2008[CLP/GHS].

Physical and chemical hazards	Not classified.
Human health	Skin Cor. 1A – H314
Environment	Not classified.

2.2. Label elements

2.2.1. Labeling According to Regulation (EC) No 1272/2008 [CLP/GHS]

GHS05

Signal Word: Danger
Contains: Potassium Hydroxide.
Hazard Statements:
H314 Causes severe skin burns and eye damage.

Precautionary Statements:
P101 If medical advice is needed, keep the container or label.
P102 Keep out of reach of children.
P103 Read the label before use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. If you have contact lenses, remove them if easy. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Remove all contaminated clothing immediately. Rinse skin with water (or take a shower).
P501 Dispose of contents/container according to local regulations.

2.1. Other hazards
This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Name	EC No.	CAS No.	Concentration %	Classification according to Regulation (EC) No 1278/2008 (CLP)
Aqua	231-791-2	7732-18-5	≤ 69,4	Not classified
Potassium Hydroxide	215-181-3	1310-58-3	≤ 24	Metal Cor. 1 - H290 Acute Tox. 4 - H302 Skin Cor. 1A - H314
Urea	200-315-5	57-13-6	≤ 6,6	Not classified

The Full Text for all Hazard Statements are Displayed in Section 16.
The highest concentration values were used for calculations.

Composition Comments
- The data shown are in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation : IF INHALED: Remove victim to fresh air and keep in a position comfortable for breathing.

Ingestion : IF SWALLOWED: Rinse mouth. DO NOT try to vomit.

Skin contact : IF ON SKIN (or hair): Remove all contaminated clothing immediately. Rinse skin with water (or take a shower).

Eye contact : IF IN EYE CONTACT: Rinse carefully with water for a few minutes. Remove contact lenses, if present and easy to perform. Continue rinsing.

4.2. Most important symptoms and effects, both acute and delayed
Inhalation : Dizzines

Ingestion : Nausea, vomiting.

Skin contact : Causes severe skin irritation.

Eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor: No specific recommendations.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media
This product is not flammable. Extinguish with foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards
In case of fire, toxic gases may be formed. Carbon monoxide (CO). Carbon dioxide (CO_2).
May cause explosion hazard of dust.

5.3. Advice for firefighters

Special Fire Fighting Procedures
Avoid breathing fire fumes. If this can be done without risk, move the container away from the fire area. If possible, intervene the fire from a protected place.

Protective equipment for fire-fighters
Self-contained breathing apparatus and full protective clothing should be worn in case of fire. Face mask, protective gloves and safety helmet should be used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions: Not considered to be a significant hazard due to the small quantities used.

6.3. Methods and material for containment and cleaning up

Wash off spills with plenty of water. Avoid contamination of ponds or streams with wash water. Absorb spillage with non-combustible absorbent material. Do not discharge into drains, waterways or on the ground.

6.4. Reference to other sections

For personal protection, see section 8.
See section 11 for additional information on health hazards.
For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not eat, drink or smoke when using the product. Protect against direct sunlight.
Read and follow manufacturer's recommendations. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Stable at normal ambient temperatures.
Protect from light, including direct sunrays.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure guidelines do not apply when the product is used as intended in a home environment.

DNEL Values

Potassium Hydroxide
(DNEL) 1 mg/m³ Local Effects Workers with Long-Term Inhalation Exposure
(DNEL) 1 mg/m³ Local Effects General Population with Long-Term Inhalation Exposure

Urea
(DNEL) 292 mg/m³ Systemic Effects Workers with Long-Term Inhalation Exposure
(DNEL) 292 mg/m³ Systemic Effects Workers with Acute/Short-Term Inhalation Exposure
(DNEL) 125 mg/m³ Systemic Effects General Population with Long-Term Inhalation Exposure
(DNEL) 125 mg/m³ Systemic Effects General Population with Acute/Short-Term Inhalation Exposure
(DNEL) 500 mg/kg bw/day Systemic Effects Workers with Long-Term Dermal Exposure
(DNEL) 500 mg/kg bw/day Systemic Effects Workers with Acute/Short-Term Dermal Exposure
(DNEL) 300 mg/kg bw/day Systemic Effects General Population with Long-Term Dermal Exposure
(DNEL) 300 mg/kg bw/day Systemic Effects General Population with Acute/Short-Term Dermal Exposure
(DNEL) 42 mg/kg bw/day Systemic Effects General Population with Long-Term Oral Exposure
(DNEL) 42 mg/kg bw/day Systemic Effects General Population with Acute/Short-Term Oral Exposure

PNEC Values

Potassium Hydroxide
Hazard for Aquatic Organisms
Freshwater No data available: testing technically not feasible (1)
Intermittent releases (freshwater) No data available: testing technically not feasible (1)
Marine water No data available: testing technically not feasible (1)
Intermittent releases (marine water) No data available: testing technically not feasible (1)
Sewage treatment plant (STP) No data available: testing technically not feasible (1)
Sediment (freshwater) No exposure of sediment expected (1)
Sediment (marine water) No exposure of sediment expected (1)

Urea
Hazard for Aquatic Organisms
Freshwater 47 - 14 070 µg/L (2)
Intermittent releases (freshwater) 100 mg/L (1)
Marine water 1.407 mg/L (1)
Intermittent releases (marine water) 100 mg/L (1)
Sewage treatment plant (STP) 1 g/L (1)
Sediment (freshwater) 68.66 mg/kg sediment dw (1)
Sediment (marine water) 6.866 mg/kg sediment dw (1)

8.2. Exposure controls

Protective equipment	
Engineering control	: Not relevant.
Respiratory equipment	: No personal protective respiratory equipment is normally required. Respiratory protection in case of vapor/aerosol release. Particulate filter EN 143 or 149, Type P2 or FFP2, medium filtering capacity (solid and liquid particles of less toxic substances).
Hand protection	: Protective in case of prolonged or repeated contact wear gloves. Protective gloves conforming to EN 374.
Eye protection	: Close-fitting safety glasses (closed goggles) (Class EN 166) and face mask.
Other skin and body protection	: Wear protective clothing such as rubber or neoprene gloves and a long sleeved T- shirt
Hygiene measures	: Eating, drinking, smoking and inhaling any substance in the workplace it is forbidden. Use in accordance with good industrial hygiene and safety practices.

Personal protection equipment must be free of hazardous and harmful substances before reuse.

Environmental Exposure Controls : Not relevant.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Transparent
Odour	Odorless
Solubility	No data available
Boiling Point	No data available
Melting point	No data available
pH-Value	11,00 – 13,00
Flash Point	No data available
Viscosity	No data available
Decomposition temperature	No data available
Density	1,00 – 1,50 g/cm^3
Partition Coefficient (N-Octanol/Water)	No data available

9.2. Other information

No information required.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Stable under suitable storage conditions.

10.4. Conditions to avoid

There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

There are no known data based on the information given.

10.6. Hazardous decomposition products

Does not decompose when used and stored as recommended.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity

Potassium Hydroxide
Oral
LD50 333 - 388 mg/kg bw (rat) [2]

Urea
Oral
LD50 14 300 - 15 000 mg/kg bw (rat) [2]
LD50 11 500 - 13 000 mg/kg bw (mouse) [2]

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Urea
Short–term toxicity to fish
LC50 (4 days) 6.81 - 28 g/L [11]
LC50 (48 h) 10 g/L [1]
LC50 (24 h) 26.36 g/L [1]
LC0 (4 days) 20 g/L [1]
LC0 (48 h) 10 g/L [1]
Short–term toxicity to aquatic invertebrates
EC50 (24 h) 10 g/L [1]

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Mobility:
Insoluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Other adverse effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Do not allow runoff to sewer, waterway or ground. Dispose of waste and residues in accordance with local authority requirements. Contact specialist disposal companies. Environmental manager must be informed of all major spillages.

SECTION 14: TRANSPORT INFORMATION

General — The product is covered by international regulation on the transport of dangerous goods

(IMDG, IATA, ADR/RID)

14.1. UN number

UN 3266

14.2. UN proper shipping name

CORROSIVE LIQUID, BASIC, INORGANIC PTASSIUM HYDROXIDE

14.3. Transport hazard class(es)

ADR Class: VIII
IMDG Class VIII
ICAO/IATA: VIII

14.4. Packing group

14.5. Environmental hazards

ADR/RID/ADN Packing group: I
IMDG Packing group: I
ICAO-IATA Packing group: I

14.6. Special precautions for user

Not applicable.

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

Not applicable.

14.5. Environmental damages

Environmentally Dangerous Substance/Marine Polluting Substance

It is a substance that is harmful to the environment

14.6. Special precautions for the user

Packing instruction: P001

Hazard number: 88

Tunnel Restriction Code: 1 (E)

SECTION 15: REGULATORY INFORMATION

This format refers to MSDS requirements American National Standard Institute(ANSI) and International Standard Organization (ISO)

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.(ADR 2015)
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.
This product is classified according to EU Directive GHS/CLP.
This safety datasheet complies with the requirements of Regulation (EC) No.1907/2006 (REACH).

Revision Comments: -

Hazard Statements All

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Prepared the Safety Data Sheet
Chemical Engineer Nazlı Kılıç / nazli@nameconsulting.com.tr
Certificate Number: KDU01.32.02 Certificate Date: 20 May 2023

Disclaimer

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guar0antee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.