V-Agri 12-9-6

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/25/2021

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : V-Agri 12-9-6

1.2. Recommended use and restrictions on use

1.3. Supplier

INNVICTIS® BIOSCIENCE
PLANT HEALTH TECHNOLOGIES
P.O. Box 9296
Boise ID 83707, - USA
T 855-466-8428

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Serious eye damage/eye irritation, Category 2B H320 Causes eye irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Signal word (GHS US) : Warning

Hazard statements (GHS US) : H320 - Causes eye irritation

Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical attention

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	GHS-US classification
urea	(CAS-No.) 57-13-6	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
potassium hydroxide	(CAS-No.) 1310-58-3	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
phosphoric acid	(CAS-No.) 7664-38-2	Met. Corr. 1, H290 Skin Corr. 1B, H314
ammonium hydroxide, solution	(CAS-No.) 1336-21-6	Skin Corr. 1A, H314 Aquatic Acute 1, H400
Disodium octaborate tetrahydrate	(CAS-No.) 12280-03-4	Resp. Sens. 1B, H334

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible materials : Metals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

V-Agri 12-9-6	
No additional information available	

urea (57-13-6)	
No additional information available	

potassium hydroxide (1310-58-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (mg/m³)	2 mg/m³

phosphoric acid (7664-38-2)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	1 mg/m³
ACGIH STEL (mg/m³)	3 mg/m³

ammonium hydroxide, solution (1336-21-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	25 ppm
ACGIH STEL (ppm)	25 ppm

Disodium octaborate tetrahydrate (12280-03-4)	
No additional information available	

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Liquid.

Colour	:	Light green
Odour	:	Slight ammonia odor
Odour threshold	:	No data available
pH	:	6.5 – 7.2
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1.22 g/ml
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

urea (57-13-6)	
LD50 oral rat	8471 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3200 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21000 mg/kg (Rabbit; Literature study)

potassium hydroxide (1310-58-3)	
LD50 oral rat	333 mg/kg (Rat)

phosphoric acid (7664-38-2)	
LD50 oral rat	(Rat)

Skin corrosion/irritation : Not classified
pH: 6.5 – 7.2

Serious eye damage/irritation : Causes eye irritation.
pH: 6.5 – 7.2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

urea (57-13-6)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

urea (57-13-6)	
LC50 fish 1	> 6810 mg/l (96 h; Leuciscus idus; Nominal concentration)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Nominal concentration)
LC50 fish 2	17500 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 2	> 10000 mg/l (24 h; Daphnia magna)
TLM fish 1	17500 ppm (96 h; Poecilia reticulata)
Threshold limit other aquatic organisms 1	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold limit other aquatic organisms 2	> 10000 mg/l (Pseudomonas putida)
Threshold limit algae 1	> 10000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)
Threshold limit algae 2	47 mg/l (192 h; Microcystis aeruginosa; Growth rate)

potassium hydroxide (1310-58-3)	
LC50 fish 1	28.6 mg/l (24 h; Pisces; Pure substance)
LC50 other aquatic organisms 1	100 – 1000 mg/l (96 h)
LC50 fish 2	80 mg/l (96 h; Gambusia affinis; Pure substance)
Threshold limit other aquatic organisms 1	100 - 1000,96 h

phosphoric acid (7664-38-2)	
LC50 fish 1	138 mg/l (96 h; Pisces; Pure substance)
LC50 other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
LC50 fish 2	100 – 1000 mg/l (Pisces; Pure substance)
LC50 other aquatic organisms 2	100 – 1000 mg/l (Pure substance)
TLM fish 1	138 ppm (24 h; Gambusia affinis; Pure substance)

phosphoric acid (7664-38-2)	
Threshold limit other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
Threshold limit other aquatic organisms 2	100 - 1000,Pure substance

ammonium hydroxide, solution (1336-21-6)	
LC50 fish 1	0.16 – 1.1 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
LC50 other aquatic organisms 1	1 – 10 mg/l (96 h; Solution >=50%)
LC50 fish 2	0.75 – 3.4 mg/l (96 h; Pimephales promelas; Solution >=50%)
TLM fish 1	47 ppm (48 h; Salmo gairdneri (Oncorhynchus mykiss); Cool water)
TLM fish 2	34 ppm (48 h; Salmo gairdneri (Oncorhynchus mykiss); Warm water)
Threshold limit other aquatic organisms 1	1 - 10,96 h; Solution >=50%

12.2. Persistence and degradability

urea (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. Not established.
ThOD	0.27 g O_2/g substance

potassium hydroxide (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable. Low potential for adsorption in soil. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

phosphoric acid (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

ammonium hydroxide, solution (1336-21-6)	
Persistence and degradability	Readily biodegradable in water. Ozonation in water. Biodegradable in the soil. No (test)data on mobility of the components available. Ozonation in the air. Not established.

Disodium octaborate tetrahydrate (12280-03-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

urea (57-13-6)	
BCF fish 1	1 (72 h; Brachydanio rerio; Fresh water)
BCF other aquatic organisms 1	11700 (Chlorella sp.)
Partition coefficient n-octanol/water (Log Pow)	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

potassium hydroxide (1310-58-3)	
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

phosphoric acid (7664-38-2)	
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

ammonium hydroxide, solution (1336-21-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.3
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

Disodium octaborate tetrahydrate (12280-03-4)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

urea (57-13-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

potassium hydroxide (1310-58-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1000 lb

phosphoric acid (7664-38-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

ammonium hydroxide, solution (1336-21-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb

Disodium octaborate tetrahydrate (12280-03-4)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

urea (57-13-6)
Listed on the Canadian DSL (Domestic Substances List)

potassium hydroxide (1310-58-3)
Listed on the Canadian DSL (Domestic Substances List)

phosphoric acid (7664-38-2)
Listed on the Canadian DSL (Domestic Substances List)

ammonium hydroxide, solution (1336-21-6)
Listed on the Canadian DSL (Domestic Substances List)

Disodium octaborate tetrahydrate (12280-03-4)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

EU-Regulations
No additional information available
National regulations
No additional information available

15.3. US State regulations

Component	State or local regulations
potassium hydroxide(1310-58-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
phosphoric acid(7664-38-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
ammonium hydroxide, solution(1336-21-6)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H320	Causes eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.