

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 7/11/2024 Version: 1.0

## **SECTION 1: Identification**

#### 1.1. Identification

Product form : Mixture
Product name : ARVIS MAXX
Product code : ARVISMAXX

#### 1.2. Recommended use and restrictions on use

Recommended use : Agriculture, forestry, fishery

#### 1.3. Supplier

#### Manufacturer

Timac Agro USA, INC. Inc. Route 724 & I-176 P.O. Box 888 Reading, PA 19607, PENSYLVANIA USA

T 1-800-545-5474 info-fds@roullier.com

#### 1.4. Emergency telephone number

Country/Area	Organization/Company	Address	Emergency number	Comment
Americas	3E		+1-760-476-3962 (Access code : 333021)	(24/7)
USA	USA POISON CONTROL CENTER (24h/7d)		1-800-222-1222	

## **SECTION 2: Hazard(s) identification**

#### 2.1. Classification of the substance or mixture

### **GHS US classification**

Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1 H318 Causes serious eye damage
Skin sensitization, Category 1 H317 May cause an allergic skin reaction
Reproductive toxicity Category 2 H361 Suspected of damaging fertility or the unborn child (Dermal,

Inhalation, oral)

Specific target organ toxicity (repeated exposure) Category 1 H372 Causes damage to organs through prolonged or repeated

exposure

Full text of H statements: see section 16

## 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

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Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H361 - Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral)

H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) : P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe vapors.

P280 - Wear protective clothing, protective clothing, eye protection, face protection, protective

gloves.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

skin with water/shower.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

#### 2.3. Other hazards which do not result in classification

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

No additional information available

### **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
Benzyl alcohol		CAS-No.: 100-51-6	25 – 50	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
Glycerol		CAS-No.: 56-81-5	25 – 50	Not classified
Phosphorothioic triamide, N-butyl		CAS-No.: 94317-64-3	10 – 25	Eye Dam. 1, H318 Repr. 2, H361
2-aminoethanol		CAS-No.: 141-43-5	5 – 10	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 1, H372
Lemon terpenes		CAS-No.: 68917-33-9	1 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

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

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#### **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. Seek medical attention if ill

effect develops.

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

physician immediately.

First-aid measures after eye contact : Rinse thoroughly and plentifully with water, also under the eyelids. Remove contact lenses, if

present and easy to do. Continue rinsing. Consult an eye specialist immediately, even if there

are no immediate symptoms.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting.

Immediately call a poison center or doctor/physician. If possible show him this sheet. Failing this,

show him the packaging or label.

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

Symptoms/effects : see section(s): 2.1/2.3).

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

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

Symptoms/effects after ingestion : Burns.

Chronic symptoms : Suspected of damaging fertility. Suspected carcinogen.

#### 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.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Phosphorus oxides. Sulphur oxides. Ammonia.

#### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Keep away from combustible material.

Firefighting instructions : Prevent fire-fighting water from entering environment. Contain the extinguishing fluids by

bunding.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-

contained breathing apparatus.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

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Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Ventilate

spillage area. Do not breathe vapors. Do not get in eyes, on skin, or on clothing. Evacuate

unnecessary personnel. Mark the danger area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not attempt to take action without suitable

protective equipment. For further information refer to section 8: "Exposure controls/personal

protection".

Emergency procedures : Ventilate area. Stop leak if safe to do so. Dike and contain spill. Evacuate unnecessary

personnel.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams. Stop leak, if possible without risk.

Methods for cleaning up : Take up liquid spill into absorbent material. Pump up the product into a suitably labeled spare

container.

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

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". 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. Do not breathe vapors. Use personal protective

equipment as required. Do not handle until all safety precautions have been read and

understood. Avoid contact with skin and eyes.

Handling temperature : ≥ 0 °

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

smoke when using this product. Remove contaminated clothes. Always wash hands after

handling the product. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. The floor of the depot should be impermeable

and designed to form a water-tight basin. Comply with applicable regulations.

Storage conditions : Protect from sunlight. Store in a well-ventilated place. Store closed containers with closure in

upper position.

Incompatible products : Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.

Storage temperature : Store at ambient temperature. Protect from freezing.

Heat-ignition : Keep away from open flames, hot surfaces and sources of ignition.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs. Storage area : Store away from heat. Store in a well-ventilated place.

Store away from neat. Store in a well-ventiliated place.

Special rules on packaging : Keep only in original container. Store in a closed container.

Packaging materials : Plastic. Store always product in container of same material as original container.

#### **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

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Glycerin (riist) USA - OSHA - Occupational Exposure Limits Local name Glycerin (mist) OSHA PEL TWA Sing/m³ (Respirable fraction) Regulatory reference (US-OSHA) OSHA Annotated Table Z-1  2-aminoethanol (141-43-5) USA - ACGIH - Occupational Exposure Limits Local name Ethanolamine ACGIH OEL TWA 3 ppm ACGIH OEL STEL 6 ppm ACGIH OEL Ceiling 3 ppm Remark (ACGIH) TLV® Basis: Eye & skin irr Regulatory reference ACGIH 2024 USA - OSHA - Occupational Exposure Limits Local name Ethanolamine OSHA PEL TWA 6 mg/m³ 3 ppm OSHA PEL STEL 6 ppm OSHA PEL Geiling 3 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits USA - NIOSH - Occupational Exposure Limits OSHA PEL (Ceiling) 3 ppm Regulatory reference (US-OSHA) OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits NIOSH REL (TWA) 3 ppm NIOSH REL (Ceiling) 3 ppm	Ohrannal (50 04 5)		
Local name Glycerin (mist)  OSHA PEL TWA 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)  Regulatory reference (US-OSHA)  OSHA Annotated Table Z-1  2-aminoethanol (141-43-5)  USA - ACGIH - Occupational Exposure Limits  Local name Ethanolamine  ACGIH OEL TWA 3 ppm  ACGIH OEL STEL 6 ppm  ACGIH OEL Ceiling 3 ppm  Remark (ACGIH) TLV® Basis: Eye & skin irr  Regulatory reference ACGIH 2024  USA - OSHA - Occupational Exposure Limits  Local name Ethanolamine  OSHA PEL TWA 6 mg/m³ 3 ppm  OSHA PEL STEL 6 ppm  OSHA PEL (Ceiling) 3 ppm  Regulatory reference (US-OSHA) OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA) 3 ppm  NIOSH REL (TWA) 3 ppm			
15 mg/m³ (Total dust)   5 mg/m³ (Respirable fraction)	USA - OSHA - Occupational Exposure Limits		
5 mg/m³ (Respirable fraction)   Regulatory reference (US-OSHA)   OSHA Annotated Table Z-1	Local name	Glycerin (mist)	
Regulatory reference (US-OSHA)  2-aminoethanol (141-43-5)  USA - ACGIH - Occupational Exposure Limits  Local name  Ethanolamine  ACGIH OEL TWA  3 ppm  ACGIH OEL STEL  6 ppm  ACGIH OEL Ceiling  3 ppm  Remark (ACGIH)  TLV® Basis: Eye & skin irr  Regulatory reference  ACGIH 2024  USA - OSHA - Occupational Exposure Limits  Local name  Ethanolamine  OSHA PEL TWA  6 mg/m³  3 ppm  OSHA PEL STEL  6 ppm  OSHA PEL (Ceiling)  3 ppm  Regulatory reference (US-OSHA)  OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA)  3 ppm  NIOSH REL (STEL)  6 ppm	OSHA PEL TWA		
2-aminoethanol (141-43-5)           USA - ACGIH - Occupational Exposure Limits           Local name         Ethanolamine           ACGIH OEL TWA         3 ppm           ACGIH OEL STEL         6 ppm           ACGIH OEL Ceiling         3 ppm           Remark (ACGIH)         TLV® Basis: Eye & skin irr           Regulatory reference         ACGIH 2024           USA - OSHA - Occupational Exposure Limits           Local name         Ethanolamine           OSHA PEL TWA         6 mg/m³           3 ppm           OSHA PEL STEL         6 ppm           OSHA PEL (Ceiling)         3 ppm           Regulatory reference (US-OSHA)         OSHA Annotated Table Z-1           USA - NIOSH - Occupational Exposure Limits         NIOSH REL (TWA)         3 ppm           NIOSH REL (STEL)         6 ppm		5 mg/m³ (Respirable fraction)	
USA - ACGIH - Occupational Exposure Limits           Local name         Ethanolamine           ACGIH OEL TWA         3 ppm           ACGIH OEL STEL         6 ppm           ACGIH OEL Ceiling         3 ppm           Remark (ACGIH)         TLV® Basis: Eye & skin irr           Regulatory reference         ACGIH 2024           USA - OSHA - Occupational Exposure Limits           Local name         Ethanolamine           OSHA PEL TWA         6 mg/m³           3 ppm           OSHA PEL STEL         6 ppm           OSHA PEL (Ceiling)         3 ppm           Regulatory reference (US-OSHA)         OSHA Annotated Table Z-1           USA - NIOSH - Occupational Exposure Limits         NIOSH REL (TWA)           NIOSH REL (STEL)         6 ppm	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1	
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USA - OSHA - Occupational Exposure Limits  Local name Ethanolamine  OSHA PEL TWA 6 mg/m³ 3 ppm  OSHA PEL STEL 6 ppm  OSHA PEL (Ceiling) 3 ppm  Regulatory reference (US-OSHA) OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA) 3 ppm  NIOSH REL (STEL) 6 ppm	Remark (ACGIH)	TLV® Basis: Eye & skin irr	
Local name         Ethanolamine           OSHA PEL TWA         6 mg/m³           3 ppm           OSHA PEL STEL         6 ppm           OSHA PEL (Ceiling)         3 ppm           Regulatory reference (US-OSHA)         OSHA Annotated Table Z-1           USA - NIOSH - Occupational Exposure Limits           NIOSH REL (TWA)         3 ppm           NIOSH REL (STEL)         6 ppm	Regulatory reference	ACGIH 2024	
OSHA PEL TWA         6 mg/m³           3 ppm           OSHA PEL STEL         6 ppm           OSHA PEL (Ceiling)         3 ppm           Regulatory reference (US-OSHA)         OSHA Annotated Table Z-1           USA - NIOSH - Occupational Exposure Limits           NIOSH REL (TWA)         3 ppm           NIOSH REL (STEL)         6 ppm	USA - OSHA - Occupational Exposure Limits		
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OSHA PEL (Ceiling)  Regulatory reference (US-OSHA)  OSHA Annotated Table Z-1  USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA)  3 ppm  NIOSH REL (STEL)  6 ppm		3 ppm	
Regulatory reference (US-OSHA)  USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA)  3 ppm  NIOSH REL (STEL)  6 ppm	OSHA PEL STEL	6 ppm	
USA - NIOSH - Occupational Exposure Limits  NIOSH REL (TWA) 3 ppm  NIOSH REL (STEL) 6 ppm	OSHA PEL (Ceiling)	3 ppm	
NIOSH REL (TWA) 3 ppm NIOSH REL (STEL) 6 ppm	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1	
NIOSH REL (STEL) 6 ppm	USA - NIOSH - Occupational Exposure Limits		
	NIOSH REL (TWA)	3 ppm	
NIOSH REL (Ceiling) 3 ppm	NIOSH REL (STEL)	6 ppm	
THOUTTHE (Coming)	NIOSH REL (Ceiling)	3 ppm	

## 8.2. Appropriate engineering controls

: Ensure good ventilation of the work station. Local exhaust and general ventilation must be Appropriate engineering controls

adequate to meet exposure standards.

Environmental exposure controls : Assure that emissions are compliant with all applicable air pollution control regulations. Comply

with applicable regulations. Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Wear recommended personal protective equipment.

Troal recommended percental protective equipment	•	
Materials for protective clothing:		
Wear suitable protective clothing		
Condition Material		
Excellent resistance:	Excellent resistance:	
Hand protection:		
Chemical resistant PVC gloves (to European standard ISO 374-1 or equivalent)		

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Туре	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves, Reusable gloves	Polyvinylchloride (PVC)			

#### Eye protection:

Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product. ISO 16321-1. Safety glasses

Туре	Field of application	Characteristics
Safety glasses		With side shields

#### Skin and body protection:

Rubber boots

#### Respiratory protection:

Where excessive vapor may result, wear approved mask. [In case of inadequate ventilation] wear respiratory protection.

Device	Filter type	Condition
Reusable half mask, Disposable half mask, Aerosol mask	Type P2, Type A - High-boiling (>65 °C) organic compounds	vapor protection

#### Personal protective equipment symbol(s):









#### Other information:

See Heading 7: 7.1. Precautions for safe handling.

### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid Color : Blue

Odor : characteristic
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available

Flash point : > 212 °F

Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : Not applicable. Vapor pressure : Not applicable Relative vapor density at 20°C : No data available

Relative density : 1.12

Solubility : Partially soluble.

Water: partly solub

Water: partly soluble

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
Explosion limits : Not applicable

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Explosive properties : Product is not explosive.

Oxidizing 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. In case of fire: See Heading 5.

#### 10.2. Chemical stability

The product is stable at normal handling and storage 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

Strong oxidizing agents. Strong acids.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). Phosphorus oxides. Sulphur dioxide. Nitrogen oxides. Ammonia.

## **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

Additional information : No experimental study on the product is available. The information given is based on our

knowledge of the components and the classification of the product is determined by calculation

ARVIS MAXX		
Additional data	No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation	
Benzyl alcohol (100-51-6)		
LD50 oral rat	1230 mg/kg	
LD50 dermal rat	> 2000 mg/kg body weight EPA OTS 798.1100	
ATE US (oral)	1230 mg/kg body weight	
ATE US (gases)	4500 ppmV/4h	
ATE US (vapors)	11 mg/l/4h	
ATE US (dust, mist)	1.5 mg/l/4h	
Phosphorothioic triamide, N-butyl (94317-64-	3)	
LD50 oral rat	2823 mg/kg (OECD 401 method)	

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Phosphorothioic triamide, N-butyl (94317-64-3)			
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)		
LD50 dermal rabbit	> 2000 mg/kg		
LC50 Inhalation - Rat	> 2.1 mg/l/4h		
ATE US (oral)	2823 mg/kg body weight		
2-aminoethanol (141-43-5)			
LD50 oral rat	1089 mg/kg (OECD 401 method)		
LD50 dermal rat	1822 mg/kg (OECD 402 method)		
ATE US (oral)	1089 mg/kg body weight		
ATE US (dermal)	1822 mg/kg body weight		
ATE US (gases)	4500 ppmV/4h		
,			
ATE US (vapors)	11 mg/l/4h		
ATE US (dust, mist)	1.5 mg/l/4h		
Skin corrosion/irritation	: Causes severe skin burns.		
2-aminoethanol (141-43-5)			
рН	12.1		
Serious eye damage/irritation	: Causes serious eye damage.		
2-aminoethanol (141-43-5)			
рН	12.1		
Respiratory or skin sensitization	: May cause an allergic skin reaction.		
Germ cell mutagenicity	: Not classified		
Carcinogenicity	: Not classified		
Reproductive toxicity	: Suspected of damaging fertility or the unborn child (Dermal, Inhalation, oral).		
STOT-single exposure	: Not classified		
ARVIS MAXX			
Additional data	No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation		
2-aminoethanol (141-43-5)			
STOT-single exposure	May cause respiratory irritation.		
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.		
ARVIS MAXX			
Additional data	No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation		
2-aminoethanol (141-43-5)			
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.		
Aspiration hazard Viscosity, kinematic	: Not classified : No data available		
Symptoms/effects	: see section(s): 2.1/2.3).		
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.		
- jp.cc.c.c.c.c.c.c			
Symptoms/effects after eye contact	: Serious damage to eyes.		
• •	<ul><li>: Serious damage to eyes.</li><li>: Burns.</li><li>: Suspected of damaging fertility. Suspected carcinogen.</li></ul>		

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## SECTION 12: Ecological information

Ecology - general : Based on available data, the classification criteria are not met. No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation. Do not allow into drains or water courses. Before neutralisation, the product may represent a danger to aquatic organisms.		
product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation. Do not allow into drains or water courses. Before neutralisation, the product may represent a danger to aquatic organisms. Do not allow large quantities, as are, to spread into the environment. Do not discharge into drains or rivers.  Benzyl alcohol (100-51-6)  LC50 - Fish [1]	12.1. Toxicity	
LC50 - Fish [1]       460 mg/l         EC50 - Crustacea [1]       230 mg/l         EC50 72h - Algae [1]       770 mg/l         Phosphorothioic triamide, N-butyl (94317-64-3)         LC50 - Fish [1]       96h 1140 mg/l Lepomis macrochirus (Bluegill)         EC50 - Crustacea [1]       290 mg/l (OECD 202 method)         EC50 - Other aquatic organisms [1]       280 mg/l Selenastrum capricornutum, 96 Hours         LC50 - Other aquatic organisms [2]       350 mg/l (Daphnia magna, 48h)         2-aminoethanol (141-43-5)         LC50 - Fish [1]       349 mg/l Cyprinus carpio         EC50 - Crustacea [1]       65 mg/l (Daphnia magna, 48h)         EC50 72h - Algae [1]       4 mg/l Test method EU C.3         NOEC chronic fish       1.2 mg/l         NOEC chronic crustacea       0.85 mg/l	Ecology - general :  Ecology - water :	product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation. Do not allow into drains or water courses. Before neutralisation, the product may represent a danger to aquatic organisms. Do not allow large quantities, as are, to spread into the environment. Do not discharge into
EC50 - Crustacea [1] 230 mg/l  EC50 72h - Algae [1] 770 mg/l  Phosphorothioic triamide, N-butyl (94317-64-3)  LC50 - Fish [1] 96h 1140 mg/l Lepomis macrochirus (Bluegill)  EC50 - Crustacea [1] 290 mg/l (OECD 202 method)  EC50 - Other aquatic organisms [1] 280 mg/l (Daphnia magna, 48h)  2-aminoethanol (141-43-5)  LC50 - Fish [1] 349 mg/l Cyprinus carpio  EC50 - Crustacea [1] 65 mg/l (Daphnia magna, 48h)  EC50 - Crustacea [1] 4 mg/l Test method EU C.3  NOEC chronic fish 1.2 mg/l  NOEC chronic crustacea 0.85 mg/l	Benzyl alcohol (100-51-6)	
Phosphorothioic triamide, N-butyl (94317-64-3)   LC50 - Fish [1]   96h 1140 mg/l Lepomis macrochirus (Bluegill)   EC50 - Crustacea [1]   290 mg/l (OECD 202 method)   EC50 - Other aquatic organisms [1]   280 mg/l Selenastrum capricornutum, 96 Hours   LC50 - Other aquatic organisms [2]   350 mg/l (Daphnia magna, 48h)   2-aminoethanol (141-43-5)   LC50 - Fish [1]   349 mg/l Cyprinus carpio   EC50 - Crustacea [1]   65 mg/l (Daphnia magna, 48h)   EC50 72h - Algae [1]   4 mg/l Test method EU C.3   NOEC chronic fish   1.2 mg/l   NOEC chronic crustacea   0.85 mg/l	LC50 - Fish [1]	460 mg/l
Phosphorothioic triamide, N-butyl (94317-64-3)           LC50 - Fish [1]         96h 1140 mg/l Lepomis macrochirus (Bluegill)           EC50 - Crustacea [1]         290 mg/l (OECD 202 method)           EC50 - Other aquatic organisms [1]         280 mg/l Selenastrum capricornutum, 96 Hours           LC50 - Other aquatic organisms [2]         350 mg/l (Daphnia magna, 48h)           2-aminoethanol (141-43-5)         49 mg/l Cyprinus carpio           EC50 - Fish [1]         65 mg/l (Daphnia magna, 48h)           EC50 - Crustacea [1]         4 mg/l Test method EU C.3           NOEC chronic fish         1.2 mg/l           NOEC chronic crustacea         0.85 mg/l	EC50 - Crustacea [1]	230 mg/l
LC50 - Fish [1]       96h 1140 mg/l Lepomis macrochirus (Bluegill)         EC50 - Crustacea [1]       290 mg/l (OECD 202 method)         EC50 - Other aquatic organisms [1]       280 mg/l Selenastrum capricornutum, 96 Hours         LC50 - Other aquatic organisms [2]       350 mg/l (Daphnia magna, 48h)         2-aminoethanol (141-43-5)       49 mg/l Cyprinus carpio         EC50 - Fish [1]       349 mg/l Cyprinus carpio         EC50 - Crustacea [1]       65 mg/l (Daphnia magna, 48h)         EC50 72h - Algae [1]       4 mg/l Test method EU C.3         NOEC chronic fish       1.2 mg/l         NOEC chronic crustacea       0.85 mg/l	EC50 72h - Algae [1]	770 mg/l
EC50 - Crustacea [1] 290 mg/l (OECD 202 method)  EC50 - Other aquatic organisms [1] 280 mg/l Selenastrum capricornutum, 96 Hours  LC50 - Other aquatic organisms [2] 350 mg/l (Daphnia magna, 48h)  2-aminoethanol (141-43-5)  LC50 - Fish [1] 349 mg/l Cyprinus carpio  EC50 - Crustacea [1] 65 mg/l (Daphnia magna, 48h)  EC50 72h - Algae [1] 4 mg/l Test method EU C.3  NOEC chronic fish 1.2 mg/l  NOEC chronic crustacea 0.85 mg/l	Phosphorothioic triamide, N-butyl (94317-64-	3)
EC50 - Other aquatic organisms [1] 280 mg/l Selenastrum capricornutum, 96 Hours  LC50 - Other aquatic organisms [2] 350 mg/l (Daphnia magna, 48h)  2-aminoethanol (141-43-5)  LC50 - Fish [1] 349 mg/l Cyprinus carpio  EC50 - Crustacea [1] 65 mg/l (Daphnia magna, 48h)  EC50 72h - Algae [1] 4 mg/l Test method EU C.3  NOEC chronic fish 1.2 mg/l  NOEC chronic crustacea 0.85 mg/l	LC50 - Fish [1]	96h 1140 mg/l Lepomis macrochirus (Bluegill)
LC50 - Other aquatic organisms [2]       350 mg/l (Daphnia magna, 48h)         2-aminoethanol (141-43-5)       LC50 - Fish [1]       349 mg/l Cyprinus carpio         EC50 - Crustacea [1]       65 mg/l (Daphnia magna, 48h)         EC50 72h - Algae [1]       4 mg/l Test method EU C.3         NOEC chronic fish       1.2 mg/l         NOEC chronic crustacea       0.85 mg/l	EC50 - Crustacea [1]	290 mg/l (OECD 202 method)
2-aminoethanol (141-43-5)           LC50 - Fish [1]         349 mg/l Cyprinus carpio           EC50 - Crustacea [1]         65 mg/l (Daphnia magna, 48h)           EC50 72h - Algae [1]         4 mg/l Test method EU C.3           NOEC chronic fish         1.2 mg/l           NOEC chronic crustacea         0.85 mg/l	EC50 - Other aquatic organisms [1]	280 mg/l Selenastrum capricornutum, 96 Hours
LC50 - Fish [1]       349 mg/l Cyprinus carpio         EC50 - Crustacea [1]       65 mg/l (Daphnia magna, 48h)         EC50 72h - Algae [1]       4 mg/l Test method EU C.3         NOEC chronic fish       1.2 mg/l         NOEC chronic crustacea       0.85 mg/l	LC50 - Other aquatic organisms [2]	350 mg/l (Daphnia magna, 48h)
EC50 - Crustacea [1] 65 mg/l (Daphnia magna, 48h)  EC50 72h - Algae [1] 4 mg/l Test method EU C.3  NOEC chronic fish 1.2 mg/l  NOEC chronic crustacea 0.85 mg/l	2-aminoethanol (141-43-5)	
EC50 72h - Algae [1] 4 mg/l Test method EU C.3  NOEC chronic fish 1.2 mg/l  NOEC chronic crustacea 0.85 mg/l	LC50 - Fish [1]	349 mg/l Cyprinus carpio
NOEC chronic fish 1.2 mg/l NOEC chronic crustacea 0.85 mg/l	EC50 - Crustacea [1]	65 mg/l (Daphnia magna, 48h)
NOEC chronic crustacea 0.85 mg/l	EC50 72h - Algae [1]	4 mg/l Test method EU C.3
· · · · · · · · · · · · · · · · · · ·	NOEC chronic fish	1.2 mg/l
NOEC chronic algae OECD 201 1 mg/l Pseudokirchneriella subcapitata (NF EN ISO 8692)	NOEC chronic crustacea	0.85 mg/l
	NOEC chronic algae	OECD 201 1 mg/l Pseudokirchneriella subcapitata (NF EN ISO 8692)

## 12.2. Persistence and degradability

ARVIS MAXX			
Persistence and degradability	No studies of longer duration have been conducted at this time.		
Biodegradation	Small adsorption		
Benzyl alcohol (100-51-6)			
Persistence and degradability	Rapidly degradable		
Glycerol (56-81-5)			
Persistence and degradability	Rapidly degradable		
Phosphorothioic triamide, N-butyl (94317-64-3	3)		
Persistence and degradability	Rapidly degradable		
Lemon terpenes (68917-33-9)			
Persistence and degradability	Rapidly degradable		
2-aminoethanol (141-43-5)	2-aminoethanol (141-43-5)		
Persistence and degradability Readily biodegradable, according to appropriate OECD test.			

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#### 12.3. Bioaccumulative potential

ARVIS MAXX		
Bioaccumulative potential	Bioaccumulation unlikely. No studies of longer duration have been conducted at this time.	
Phosphorothioic triamide, N-butyl (94317-64-3)		
Partition coefficient n-octanol/water (Log Kow) 0.444		
2-aminoethanol (141-43-5)		
Bioconcentration factor (BCF REACH) < 100		
Partition coefficient n-octanol/water (Log Pow)	-1.91	
Bioaccumulative potential	Low bioaccumulation potential.	

#### 12.4. Mobility in soil

2-aminoethanol (141-43-5)	
Mobility in soil	Very mobile

#### 12.5. Other adverse effects

Other information : No other effects known.

#### **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

Regional waste regulation : Disposal must be done according to official regulations.

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

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Discharging into rivers and drains is forbidden. Disposal must be done according to official

regulations.

Additional information : Do not re-use empty containers.

#### **SECTION 14: Transport information**

In accordance with DOT / TMD / IMDG / IATA

#### 14.1. UN number

 UN-No.(DOT)
 : UN2491

 UN-No. (TDG)
 : UN2491

 UN-No. (IMDG)
 : 2491

 UN-No. (IATA)
 : 2491

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Ethanolamine solutions
Proper Shipping Name (TDG) : ETHANOLAMINE SOLUTION
Proper Shipping Name (IMDG) : ETHANOLAMINE SOLUTION
Proper Shipping Name (IATA) : Ethanolamine solution

#### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8

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#### **TDG**

Transport hazard class(es) (TDG) : 8
Hazard labels (TDG) : 8



#### **IMDG**

Transport hazard class(es) (IMDG) : 8
Hazard labels (IMDG) : 8



#### **IATA**

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



#### 14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : III
Packing group (IMDG) : III
Packing group (IATA) : III

#### 14.5. Environmental hazards

Other information : No supplementary information available.

#### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN2491

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite

(31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table

2 for UN2672).

T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Quantity Limitations Passenger aircraft/rail (49 : 5 L

CFR 173.27)

### Safety Data Sheet

**DOT Vessel Stowage Location** 

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

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

: 60 L

DOT Vessel Stowage Other : 52 - Stow "separated from" acids

**TDG** 

UN-No. (TDG) : UN2491
Explosive Limit and Limited Quantity Index : 5 L
Excepted quantities (TDG) : E1
Passenger Carrying Road Vehicle or Passenger : 5 L

Carrying Railway Vehicle Index

Emergency Response Guide (ERG) Number : 153

IMDG

Special provision (IMDG): 223Limited quantities (IMDG): 5 LExcepted quantities (IMDG): E1Packing instructions (IMDG): P001, LP01IBC packing instructions (IMDG): IBC03

Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

Α

Stowage category (IMDG) :

Segregation (IMDG) : SGG18, SG35

Properties and observations (IMDG) : Colourless. Miscible with water. Corrosive to copper, copper compounds, copper alloys and

rubber. Reacts violently with acids. Liquid and vapour cause burns to skin, eyes and mucous

membranes.

**IATA** 

PCA Excepted quantities (IATA) : E1 PCA Limited quantities (IATA) Y841 PCA limited quantity max net quantity (IATA) · 1I PCA packing instructions (IATA) 852 PCA max net quantity (IATA) : 5L CAO packing instructions (IATA) 856 CAO max net quantity (IATA) 60L Special provision (IATA) : A3. A803 ERG code (IATA) : 8L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

Phosphorothioic triamide, N-butyl CAS-No. 94317-64-3 10 – 25%

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#### 15.2. International regulations

#### CANADA

#### Benzyl alcohol (100-51-6)

Listed on the Canadian DSL (Domestic Substances List)

#### **Glycerol (56-81-5)**

Listed on the Canadian DSL (Domestic Substances List)

#### Phosphorothioic triamide, N-butyl (94317-64-3)

Listed on the Canadian DSL (Domestic Substances List)

#### Lemon terpenes (68917-33-9)

Listed on the Canadian DSL (Domestic Substances List)

#### 2-aminoethanol (141-43-5)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

No additional information available

#### **National regulations**

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

#### **SECTION 16: Other information**

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

Data sources : Safety Data Sheet Supplier. Section 1.2, 8.1, 11 & 12 are based on components' Chemical

Safety Report and/or datas from components' supplie.

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of hazard classes and H-statements		
H226	Flammable liquid and vapor	
H227	Combustible liquid	
H302	Harmful if swallowed	
H304	May be fatal if swallowed and enters airways	
H312	Harmful in contact with skin	
H314	Causes severe skin burns and eye damage	
H315	Causes skin irritation	
H317	May cause an allergic skin reaction	
H318	Causes serious eye damage	

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Full text of hazard classes and H-statements		
H319	Causes serious eye irritation	
H332	Harmful if inhaled	
H335	May cause respiratory irritation	
H361	Suspected of damaging fertility or the unborn child	
H372	Causes damage to organs through prolonged or repeated exposure	
H401	Toxic to aquatic life	
H411	Toxic to aquatic life with long lasting effects	

Abbreviations and acronyms		
ATE	Acute Toxicity Estimate	
DNEL	Derived-No Effect Level	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
EC50	Median effective concentration	
DMEL	Derived Minimal Effect level	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
LC50	Median lethal concentration	
SDS	Safety Data Sheet	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
vPvB	Very Persistent and Very Bioaccumulative	

NFPA health hazard

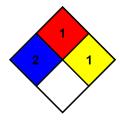
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard NFPA reactivity

: 1 - Materials that must be preheated before ignition can occur.

: 1 - Materials that in themselves are normally stable but can become

unstable at elevated temperatures and pressures.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

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Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids,

solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high

temperatures and pressures. Materials may react non-violently with water or undergo hazardous

polymerization in the absence of inhibitors.

Personal protection : n - Splash goggles

p - Gloves

q - Boots

r - Synthetic apron

Safety Data Sheet (SDS), USA

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.