

AGRONOMIC SERVICES

Version #: 01
 Issue date: 08-April-2025
 Revision date: -
 Supersedes date: -

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture ANVOL US

Registration number -

Synonyms None.

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

Identified uses Fertilizer Additive.

Uses advised against Uses other than the recommended use.

1.3. Details of the supplier of the safety data sheet

Manufacturer Koch Agronomic Services, LLC
 4111 E 37th St N
 Wichita, KS 67220 US
 kochmsds@kochind.com
 1.866.863.5550

Emergency telephone Call CHEMTREC Day or Night
 USA/Canada - 1.800.424.9300
 Outside USA/Canada
 -1.703.527.3887
 (Please reverse charges)

1.4. Emergency telephone number

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

National Poisons Control Centre ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Reproductive toxicity	Category 2	H361 - Suspected of damaging fertility or the unborn child.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Duromide, N-(n-butyl)-thiophosphoric triamide, Poly(oxy-1,2-ethanediyl), α-hydro-omega-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates, Phosphoric acid

Hazard pictograms



Signal word Danger

Hazard statements
 H315 Causes skin irritation.

H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P310 Immediately call a POISON CENTRE/doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage

Not assigned.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information on the label

None.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight. The mixture does not contain any substances having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Duromide	< 30	2093385-47-6	-	-	
Classification: -					
N-(n-butyl)-thiophosphoric triamide	< 20	94317-64-3 435-740-7	01-0000018183-74-XXXX	-	
Classification: Eye Dam. 1;H318, Repr. 2;H361					
Poly(oxy-1,2-ethanediyl), α-hydro-.omega.-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates	< 10	154518-39-5	-	-	
Classification: Skin Irrit. 2;H315, Eye Dam. 1;H318					
Phosphoric acid	< 2	7664-38-2 231-633-2	-	015-011-00-6	#
Classification: Met. Corr. 1;H290, Acute Tox. 4;H302;(ATE: 2000 mg/kg bw), Acute Tox. 4;H312;(ATE: 1260 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, STOT SE 3;H335					
Specific Concentration Limits: Skin Corr. 1B;H314: C ≥ 25 %, Skin Irrit. 2;H315: 10 % ≤ C < 25 %, Eye Dam. 1;H314: C ≥ 25 %, Eye Irrit. 2;H319: 10 % ≤ C < 25 %					

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).

Composition comments

The full text for all H-statements is displayed in section 16. All concentrations are in percent by weight.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).
7.3. Specific end use(s)	Fertilizer Additive. Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

France. OELs. Indicative Occupational Exposure Limits as Prescribed by Order of 30 June 2004, as amended

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	VLE	2 mg/m3
		0,5 ppm
	VME	1 mg/m3
		0,2 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	VLE	2 mg/m3
Regulatory status:	Indicative regulatory limit values (order of 30-06-2004 amended)	0,5 ppm
Regulatory status:	Indicative regulatory limit values (order of 30-06-2004 amended)	

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,06 mg/kg bw/day	300	Effect on fertility
Long-term, Systemic, Inhalation	0,155 mg/m3	75	Effect on fertility
Long-term, Systemic, Oral	0,06 mg/kg bw/day	300	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3	15	Repeated dose toxicity
Long-term, Systemic, Inhalation	50 mg/m3	5	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,12 mg/kg bw/day	150	Effect on fertility
Long-term, Systemic, Inhalation	0,63 mg/m3	37,5	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3		Repeated dose toxicity
Long-term, Systemic, Inhalation	168 mg/m3	3	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Freshwater	0,28 mg/l	1000	
Marine water	0,028 mg/l	10000	
Sediment (freshwater)	1,51 mg/kg		
Sediment (marine water)	0,15 mg/kg		
Soil	0,94 mg/kg	1000	
STP	8,8 mg/l	100	
Propylene glycol (CAS 57-55-6)			
Freshwater	260 mg/l		
Intermittent releases	183 mg/l		
Marine water	26 mg/l		
Sediment (freshwater)	572 mg/kg		
Sediment (marine water)	57,2 mg/kg		
Soil	50 mg/kg		
STP	20000 mg/l		

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.
Individual protection measures, such as personal protective equipment	
General information	Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear approved safety goggles. Face shield is recommended. Eye protection should meet standard EN 166.
Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves. Wear suitable gloves tested to EN374.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapour cartridge and full facepiece. Follow guidance on selection, use, care and maintenance in accordance with EN 529.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Colour	Green.
Odour	Not determined.
Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not determined.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not determined.
Explosive limit - lower (%) temperature	Not determined.
Explosive limit – upper (%)	Not determined.
Explosive limit - upper (%) temperature	Not determined.
Flash point	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
pH	6 - 9,5
Kinematic viscosity	Not determined.
Solubility	
Solubility (water)	Not determined.
Partition coefficient (n-octanol/water) (log value)	Not determined.
Vapour pressure	Not determined.
Density and/or relative density	
Density	9 - 9,3 lb/gal (1 - 1,2 kg/l)
Vapour density	Not determined.
Particle characteristics	Not applicable.

9.2. Other information

9.2.1. Information with regard to physical hazard classes No relevant additional information available.

9.2.2. Other safety characteristics

Viscosity 110 - 300 cP

SECTION 10: Stability and reactivity

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

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Contact with incompatible materials.

10.5. Incompatible materials Strong oxidising agents.

10.6. Hazardous decomposition products No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

Ingestion May cause discomfort if swallowed.

Symptoms Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

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

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Duromide (CAS 2093385-47-6)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Dust</i>		
LC50	Rat	> 2,2 mg/l, 4 hours
Oral		
LD50	Rat	> 2000 mg/kg
Phosphoric acid (CAS 7664-38-2)		
Acute		
Dermal		
LD50	Rabbit	> 1260 mg/kg, 24 Hours
Oral		
LD50	Rat	<= 2000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
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	Suspected of damaging fertility or the unborn child.	

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not an aspiration hazard.

Mixture versus substance information No information available.

11.2. Information on other hazards

Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

Other information None known.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Results
Duromide (CAS 2093385-47-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EL50	Daphnia magna	> 100 mg/l, 48 hours
<i>Chronic</i>			
Algae	EL50	Raphidocelis subcapitata	> 100 mg/l, 72 hours
	NOEL	Raphidocelis subcapitata	> 100 mg/l, 72 hours
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Aquatic			
Algae	EC50	Algae (Selenastrum capricornotum)	280 mg/l, 96 hours
Crustacea	EC50	Daphnia	290 mg/l, 48 hours
	LC50	Daphnia	350 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	1140 mg/l, 96 hours
Phosphoric acid (CAS 7664-38-2)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	32 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	> 376 mg/l, 48 Hours
Fish	LC50	Oryzias latipes	75,1 mg/l, 96 Hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

12.7. Other adverse effects No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Discourage sewage disposal. Waste should not be disposed of by release to sewers. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

RID

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

ADN

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IATA

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IMDG

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-

14.5. Environmental hazards

Marine pollutant No.

EmS Not assigned.

14.6. Special precautions for user Not assigned.

14.7. Maritime transport in bulk according to IMO instruments Not established.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EU) No. 2024/590 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

France regulations

France INRS Table of Occupational Diseases

Not regulated.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
vPvB: Very persistent and very bioaccumulative.

References

IARC Monographs. Overall Evaluation of Carcinogenicity
ECHA: European Chemical Agency.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.

Training information

Follow training instructions when handling this material.

Disclaimer

NOTICE: The information contained in this document is based on data considered to be accurate as of the preparation date of this Safety Data Sheet (SDS) and was prepared pursuant to applicable Government regulation(s). This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the above data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided about any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. Purchasers and users of the product are responsible for determining that this product is suitable for the intended use and application. No responsibility can be assumed by vendor for any damage or injury resulting from failure to adhere to recommended uses, or from any hazards inherent to the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product should explicitly advise their employees, agents, contractors and customers who will use the product of this SDS.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture ANVOL US

Registration number -

Synonyms None.

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

Identified uses Fertilizer Additive.

Uses advised against Uses other than the recommended use.

1.3. Details of the supplier of the safety data sheet

Manufacturer Koch Agronomic Services, LLC
 4111 E 37th St N
 Wichita, KS 67220 US
 kochmsds@kochind.com
 1.866.863.5550

Emergency telephone Call CHEMTREC Day or Night
 USA/Canada - 1.800.424.9300
 Outside USA/Canada
 -1.703.527.3887
 (Please reverse charges)

1.4. Emergency telephone number

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

Poison Information Centre telephone number (0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Reproductive toxicity	Category 2	H361 - Suspected of damaging fertility or the unborn child.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Duromide, N-(n-butyl)-thiophosphoric triamide, Poly(oxy-1,2-ethanediyl), α-hydro-omega-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates, Phosphoric acid

Hazard pictograms



Signal word Danger

Hazard statements
 H315 Causes skin irritation.

H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P310 Immediately call a POISON CENTRE/doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage

Not assigned.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information on the label

None.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight. The mixture does not contain any substances having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Duromide	< 30	2093385-47-6	-	-	
Classification: -					
N-(n-butyl)-thiophosphoric triamide	< 20	94317-64-3 435-740-7	01-0000018183-74-XXXX	-	
Classification: Eye Dam. 1;H318, Repr. 2;H361					
Poly(oxy-1,2-ethanediyl), α-hydro-.omega.-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates	< 10	154518-39-5	-	-	
Classification: Skin Irrit. 2;H315, Eye Dam. 1;H318					
Phosphoric acid	< 2	7664-38-2 231-633-2	-	015-011-00-6	#
Classification: Met. Corr. 1;H290, Acute Tox. 4;H302;(ATE: 2000 mg/kg bw), Acute Tox. 4;H312;(ATE: 1260 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, STOT SE 3;H335					
Specific Concentration Limits: Skin Corr. 1B;H314: C ≥ 25 %, Skin Irrit. 2;H315: 10 % ≤ C < 25 %, Eye Dam. 1;H314: C ≥ 25 %, Eye Irrit. 2;H319: 10 % ≤ C < 25 %					

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).

Composition comments

The full text for all H-statements is displayed in section 16. All concentrations are in percent by weight.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).
7.3. Specific end use(s)	Fertilizer Additive. Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Greece. OELs, Presidential Decree No. 307/1986, as amended

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,06 mg/kg bw/day	300	Effect on fertility
Long-term, Systemic, Inhalation	0,155 mg/m3	75	Effect on fertility
Long-term, Systemic, Oral	0,06 mg/kg bw/day	300	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3	15	Repeated dose toxicity
Long-term, Systemic, Inhalation	50 mg/m3	5	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,12 mg/kg bw/day	150	Effect on fertility
Long-term, Systemic, Inhalation	0,63 mg/m3	37,5	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3		Repeated dose toxicity
Long-term, Systemic, Inhalation	168 mg/m3	3	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Freshwater	0,28 mg/l	1000	
Marine water	0,028 mg/l	10000	
Sediment (freshwater)	1,51 mg/kg		
Sediment (marine water)	0,15 mg/kg		
Soil	0,94 mg/kg	1000	
STP	8,8 mg/l	100	
Propylene glycol (CAS 57-55-6)			
Freshwater	260 mg/l		
Intermittent releases	183 mg/l		
Marine water	26 mg/l		
Sediment (freshwater)	572 mg/kg		
Sediment (marine water)	57,2 mg/kg		
Soil	50 mg/kg		
STP	20000 mg/l		

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear approved safety goggles. Face shield is recommended. Eye protection should meet standard EN 166.

Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves. Wear suitable gloves tested to EN374.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapour cartridge and full facepiece. Follow guidance on selection, use, care and maintenance in accordance with EN 529.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Colour	Green.
Odour	Not determined.
Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not determined.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not determined.
Explosive limit - lower (%) temperature	Not determined.
Explosive limit – upper (%)	Not determined.
Explosive limit - upper (%) temperature	Not determined.
Flash point	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
pH	6 - 9,5
Kinematic viscosity	Not determined.
Solubility	
Solubility (water)	Not determined.
Partition coefficient (n-octanol/water) (log value)	Not determined.
Vapour pressure	Not determined.
Density and/or relative density	
Density	9 - 9,3 lb/gal (1 - 1,2 kg/l)
Vapour density	Not determined.
Particle characteristics	Not applicable.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	
Viscosity	110 - 300 cP

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	May cause discomfort if swallowed.

Symptoms Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

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

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Duromide (CAS 2093385-47-6)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Dust</i>		
LC50	Rat	> 2,2 mg/l, 4 hours
Oral		
LD50	Rat	> 2000 mg/kg
Phosphoric acid (CAS 7664-38-2)		
Acute		
Dermal		
LD50	Rabbit	> 1260 mg/kg, 24 Hours
Oral		
LD50	Rat	<= 2000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
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	Suspected of damaging fertility or the unborn child.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Not an aspiration hazard.	
Mixture versus substance information	No information available.	

11.2. Information on other hazards

Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
Other information	None known.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Results
Duromide (CAS 2093385-47-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EL50	Daphnia magna	> 100 mg/l, 48 hours
<i>Chronic</i>			
Algae	EL50	Raphidocelis subcapitata	> 100 mg/l, 72 hours
	NOEL	Raphidocelis subcapitata	> 100 mg/l, 72 hours
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Aquatic			
Algae	EC50	Algae (Selenastrum capricornotum)	280 mg/l, 96 hours
Crustacea	EC50	Daphnia	290 mg/l, 48 hours
	LC50	Daphnia	350 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	1140 mg/l, 96 hours
Phosphoric acid (CAS 7664-38-2)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	32 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	> 376 mg/l, 48 Hours
Fish	LC50	Oryzias latipes	75,1 mg/l, 96 Hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

12.7. Other adverse effects No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Discourage sewage disposal. Waste should not be disposed of by release to sewers. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

RID

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

ADN

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IATA

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IMDG

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary hazard	-
14.4. Packing group	-
14.5. Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
14.6. Special precautions for user	Not assigned.
14.7. Maritime transport in bulk according to IMO instruments	Not established.

SECTION 15: Regulatory information

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

ANVOL US

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EU regulations

Regulation (EU) No. 2024/590 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

IMO: International Maritime Organization.

PBT: Persistent, bioaccumulative and toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TWA: Time Weighted Average.

vPvB: Very persistent and very bioaccumulative.

References

IARC Monographs. Overall Evaluation of Carcinogenicity

ECHA: European Chemical Agency.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any statements,
which are not written out in full
under sections 2 to 15**

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.

Training information

Follow training instructions when handling this material.

Disclaimer

NOTICE: The information contained in this document is based on data considered to be accurate as of the preparation date of this Safety Data Sheet (SDS) and was prepared pursuant to applicable Government regulation(s). This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the above data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided about any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. Purchasers and users of the product are responsible for determining that this product is suitable for the intended use and application. No responsibility can be assumed by vendor for any damage or injury resulting from failure to adhere to recommended uses, or from any hazards inherent to the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product should explicitly advise their employees, agents, contractors and customers who will use the product of this SDS.

AGRONOMIC SERVICES

Version #: 01

Issue date: 03-April-2025

Revision date: -

Supersedes date: -

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Trade name or designation of the mixture** ANVOL US**Registration number** -**Synonyms** None.**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses** Fertilizer Additive.**Uses advised against** Uses other than the recommended use.**1.3. Details of the supplier of the safety data sheet****Manufacturer** Koch Agronomic Services, LLC
4111 E 37th St N
Wichita, KS 67220 US
kochmsds@kochind.com
1.866.863.5550**Emergency telephone** Call CHEMTREC Day or Night
USA/Canada - 1.800.424.9300
Outside USA/Canada
-1.703.527.3887
(Please reverse charges)**1.4. Emergency telephone number****General in EU** 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended**Health hazards**

Skin corrosion/irritation Category 2 H315 - Causes skin irritation.

Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage.

Reproductive toxicity Category 2 H361 - Suspected of damaging fertility or the unborn child.

2.2. Label elements**Label according to Regulation (EC) No. 1272/2008 as amended****Contains:** Duromide, N-(n-butyl)-thiophosphoric triamide, Poly(oxy-1,2-ethanediyl), α -hydro-.omega.-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates, Phosphoric acid**Hazard pictograms****Signal word** Danger**Hazard statements**H315 Causes skin irritation.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P310	Immediately call a POISON CENTRE/doctor.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Storage

Not assigned.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
------	-----------------------------------------------------------------------------------------------------

Supplemental information on the label

None.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight. The mixture does not contain any substances having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Duromide	< 30	2093385-47-6	-	-	
Classification: -					
N-(n-butyl)-thiophosphoric triamide	< 20	94317-64-3 435-740-7	01-0000018183-74-XXXX	-	
Classification: Eye Dam. 1;H318, Repr. 2;H361					
Poly(oxy-1,2-ethanediyl), α-hydro-.omega.-hydroxy-, mono(C10-rich C9-11-isoalkyl) ethers, phosphates	< 10	154518-39-5	-	-	
Classification: Skin Irrit. 2;H315, Eye Dam. 1;H318					
Phosphoric acid	< 2	7664-38-2 231-633-2	-	015-011-00-6	#
Classification: Met. Corr. 1;H290, Acute Tox. 4;H302;(ATE: 2000 mg/kg bw), Acute Tox. 4;H312;(ATE: 1260 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, STOT SE 3;H335					
Specific Concentration Limits: Skin Corr. 1B;H314: C ≥ 25 %, Skin Irrit. 2;H315: 10 % ≤ C < 25 %, Eye Dam. 1;H314: C ≥ 25 %, Eye Irrit. 2;H319: 10 % ≤ C < 25 %					

List of abbreviations and symbols that may be used above

- ATE: Acute toxicity estimate.
- M: M-factor
- vPvB: very persistent and very bioaccumulative substance.
- PBT: persistent, bioaccumulative and toxic substance.
- #: This substance has been assigned Union workplace exposure limit(s).

Composition comments

The full text for all H-statements is displayed in section 16. All concentrations are in percent by weight.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. TRGS 510 storage class: 12. Store away from incompatible materials (see section 10 of the SDS).
7.3. Specific end use(s)	Fertilizer Additive. Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated

Components	Type	Value	Form
Phosphoric acid (CAS 7664-38-2)	TWA	2 mg/m3	Inhalable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Phosphoric acid (CAS 7664-38-2)	AGW	2 mg/m3	Inhalable fraction.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m3
	TWA	1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)**General population**

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,06 mg/kg bw/day	300	Effect on fertility
Long-term, Systemic, Inhalation	0,155 mg/m3	75	Effect on fertility
Long-term, Systemic, Oral	0,06 mg/kg bw/day	300	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3	15	Repeated dose toxicity
Long-term, Systemic, Inhalation	50 mg/m3	5	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Long-term, Systemic, Dermal	0,12 mg/kg bw/day	150	Effect on fertility
Long-term, Systemic, Inhalation	0,63 mg/m3	37,5	Effect on fertility
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3		Repeated dose toxicity
Long-term, Systemic, Inhalation	168 mg/m3	3	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Freshwater	0,28 mg/l	1000	
Marine water	0,028 mg/l	10000	
Sediment (freshwater)	1,51 mg/kg		
Sediment (marine water)	0,15 mg/kg		
Soil	0,94 mg/kg	1000	
STP	8,8 mg/l	100	
Propylene glycol (CAS 57-55-6)			
Freshwater	260 mg/l		
Intermittent releases	183 mg/l		
Marine water	26 mg/l		
Sediment (freshwater)	572 mg/kg		
Sediment (marine water)	57,2 mg/kg		
Soil	50 mg/kg		
STP	20000 mg/l		

8.2. Exposure controls**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment**General information**

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear approved safety goggles. Face shield is recommended. Eye protection should meet standard EN 166.

Skin protection**- Hand protection**

Wear appropriate chemical resistant gloves. Wear suitable gloves tested to EN374.

- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapour cartridge and full facepiece. Follow guidance on selection, use, care and maintenance in accordance with EN 529.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Colour	Green.
Odour	Not determined.
Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not determined.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not determined.
Explosive limit - lower (%) temperature	Not determined.
Explosive limit – upper (%)	Not determined.
Explosive limit - upper (%) temperature	Not determined.
Flash point	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
pH	6 - 9,5
Kinematic viscosity	Not determined.
Solubility	
Solubility (water)	Not determined.
Partition coefficient (n-octanol/water) (log value)	Not determined.
Vapour pressure	Not determined.
Density and/or relative density	
Density	9 - 9,3 lb/gal (1 - 1,2 kg/l)
Vapour density	Not determined.
Particle characteristics	Not applicable.

9.2. Other information

9.2.1. Information with regard to physical hazard classes No relevant additional information available.

9.2.2. Other safety characteristics

Viscosity 110 - 300 cP

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.

10.6. Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

- Inhalation** Prolonged inhalation may be harmful.
- Skin contact** Causes skin irritation.
- Eye contact** Causes serious eye damage.
- Ingestion** May cause discomfort if swallowed.

Symptoms Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

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

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Duromide (CAS 2093385-47-6)		
<u>Acute</u>		
Oral		
LD50	Rat	> 2000 mg/kg
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Dust</i>		
LC50	Rat	> 2,2 mg/l, 4 hours
Oral		
LD50	Rat	> 2000 mg/kg
Phosphoric acid (CAS 7664-38-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 1260 mg/kg, 24 Hours
Oral		
LD50	Rat	<= 2000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
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	Suspected of damaging fertility or the unborn child.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Not an aspiration hazard.	
Mixture versus substance information	No information available.	

11.2. Information on other hazards

- Endocrine disrupting properties** This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

Other information None known.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Results
Duromide (CAS 2093385-47-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EL50	Daphnia magna	> 100 mg/l, 48 hours
<i>Chronic</i>			
Algae	EL50	Raphidocelis subcapitata	> 100 mg/l, 72 hours
	NOEL	Raphidocelis subcapitata	> 100 mg/l, 72 hours
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
Aquatic			
Algae	EC50	Algae (Selenastrum capricornotum)	280 mg/l, 96 hours
Crustacea	EC50	Daphnia	290 mg/l, 48 hours
	LC50	Daphnia	350 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	1140 mg/l, 96 hours
Phosphoric acid (CAS 7664-38-2)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	32 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	> 376 mg/l, 48 Hours
Fish	LC50	Oryzias latipes	75,1 mg/l, 96 Hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

12.7. Other adverse effects No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Discourage sewage disposal. Waste should not be disposed of by release to sewers. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number Not regulated as dangerous goods.

14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
 Class Not assigned.
 Subsidiary hazard -
 Hazard No. (ADR) Not assigned.
 Tunnel restriction code Not assigned.
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

RID

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
 Class Not assigned.
 Subsidiary hazard -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

ADN

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
 Class Not assigned.
 Subsidiary hazard -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

IATA

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
 Class Not assigned.
 Subsidiary hazard -
14.4. Packing group -
14.5. Environmental hazards No.
14.6. Special precautions for user Not assigned.

IMDG

14.1. UN number Not regulated as dangerous goods.
14.2. UN proper shipping name Not regulated as dangerous goods.
14.3. Transport hazard class(es)
 Class Not assigned.
 Subsidiary hazard -
14.4. Packing group -
14.5. Environmental hazards
 Marine pollutant No.
 EmS Not assigned.
14.6. Special precautions for user Not assigned.

14.7. Maritime transport in bulk according to IMO instruments Not established.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EU) No. 2024/590 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended

Not listed.

Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

Water hazard class

AwSV

WGK1

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

IMO: International Maritime Organization.

PBT: Persistent, bioaccumulative and toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

vPvB: Very persistent and very bioaccumulative.

References

IARC Monographs. Overall Evaluation of Carcinogenicity

ECHA: European Chemical Agency.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any statements,
which are not written out in full
under sections 2 to 15**

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.

Training information

Follow training instructions when handling this material.

Disclaimer

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