

## SAFETY DATA SHEET

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

1.1. Product identifier	
Trade name or designation of the mixture	KAS Liquid Urease Inhibitor 26.7%
Registration number	-
Synonyms	None.
Product number	KAS_LiquidUrea267_ZA_EN
Issue date	22-October-2021
Version number	01
Revision date	-
Supersedes date	-
1.2. Relevant identified uses of	the substance or mixture and uses advised against
Identified uses	Fertilizer Additive.
Uses advised against	None known.
1.3. Details of the supplier of th	e safety data sheet
Manufacturer	Koch Agronomic Services, LLC
	4111 E 37th St N
	Wichita, KS 67220 US
	kochmsds@kochind.com
	1.866.863.5550
1.4. Emergency telephone number	Call CHEMTREC day or night
	USA/Canada - 1.800.424.9300
	Outside USA/Canada
	-1.703.527.3887
	(Please reverse charges)

### **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 1B	H360 - May damage fertility or the unborn child.
Specific target organ toxicity - single exposure	Category 3 respiratory tract irritation	H335 - May cause respiratory irritation.

Hazard summary

Causes serious eye damage. Causes skin irritation. May cause irritation to the respiratory system. May cause reproductive effects. Occupational exposure to the substance or mixture may cause adverse health effects.

### 2.2. Label elements

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

Contains:

N-(n-butyl)-thiophosphoric triamide, N-methyl-2-pyrrolidone, Propylene glycol

Hazard pictograms

Signal word Hazard statements

Danger

H315	Causes skin irrita				
H318 H335	Causes serious e May cause respir		on.		
H360	May damage ferti			d.	
Precautionary statements Prevention					
P201	Obtain special ins				
P202 P261	Do not handle un Avoid breathing n			ns have been read and unde	rstood.
P264	Wash thoroughly	after handlir	ng.		
P280	Wear protective g	loves/protec	ctive cloth	ing/eye protection/face prote	ction.
Response			1. 6 1		1
P304 + P340 P305 + P351 + P338		e cautiously	with wate	air and keep comfortable for er for several minutes. Remo	preatning. ve contact lenses, if present
P310	Immediately call a	a POISON C	ENTRE/C	loctor.	
Storage	Not available.				
Disposal	Not available.				
Supplemental label information	None.				
2.3. Other hazards	Not a PBT or vPv	B substance	e or mixtu	re.	
SECTION 3: Composition/i	nformation on	ingredie	nts		
3.2. Mixtures					
General information					
Chemical name	%	CAS-No.	/ EC No.	<b>REACH Registration No.</b>	Index No. Notes
Propylene glycol	40 - 70	57-5 200-3		01-2119456809-23-XXXX	-
Classification: -					
N-(n-butyl)-thiophosphoric tria	mide 15 - 40	94317- 435-7-		01-0000018183-74-XXXX	-
Classification: Eye	Dam. 1;H318, Rep	or. 2;H361			
N-methyl-2-pyrrolidone	10 - 30	872-5 212-8		01-2119472430-46-XXXX	606-021-00-7 #
Classification: Skir	n Irrit. 2;H315, Eye	Irrit. 2;H319	, STOT S	E 3;H335, Repr. 1B;H360D	
Non-hazardous components	1 - 5	Proprie -	etary	-	-
Non-hazardous components Classification: -	1 - 5	Proprie -	etary	-	-
	Is that may be use	ed above		- s).	-
Classification: - List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulati	Is that may be use ssigned Union work	ed above place expos		- 3).	-
Classification: List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulat vPvB: very persistent and very	<b>Is that may be use</b> ssigned Union work ive and toxic substa bioaccumulative s	ed above place expos ance. ubstance.	sure limit(s		- s. Gas concentrations are in
Classification: - List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulati	Is that may be use signed Union work bioaccumulative s All concentrations percent by volum This Safety Data on specified sales	ed above place expose ance. ubstance. are in perce e. Sheet is not s orders, cus	sure limit(s ent by we a guaran	ight unless ingredient is a ga tee of product specification o roices, or product specificatio	
Classification: List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulati vPvB: very persistent and very Composition comments	Is that may be use ssigned Union work bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full	ed above place expose ance. ubstance. are in perce e. Sheet is not s orders, cus	sure limit(s ent by we a guaran	ight unless ingredient is a ga tee of product specification o	or NPK value(s). NPK content is on sheets obtained from
Classification: List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulative vPvB: very persistent and very Composition comments SECTION 4: First aid measure	Is that may be use signed Union work tive and toxic substar bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full	ed above place expose ance. ubstance. are in perce e. Sheet is not s orders, cus text for all H	ent by we a guaran stomer inv -statemer	ight unless ingredient is a ga tee of product specification of roices, or product specification ts is displayed in section 16	or NPK value(s). NPK content is on sheets obtained from
Classification: List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulati vPvB: very persistent and very Composition comments	Is that may be use signed Union work tive and toxic substar bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full sures IF exposed or cor (show the label w	ed above place expose ance. ubstance. s are in perce e. Sheet is not s orders, cus text for all H ncerned: Ge here possible	sure limit(s ent by we a guaran stomer inv -statemer t medical le). Ensur	ight unless ingredient is a ga tee of product specification of roices, or product specification ts is displayed in section 16 advice/attention. If you feel us e that medical personnel are	or NPK value(s). NPK content is on sheets obtained from unwell, seek medical advice
Classification: List of abbreviations and symbo #: This substance has been as M: M-factor PBT: persistent, bioaccumulative vPvB: very persistent and very Composition comments SECTION 4: First aid measure	Is that may be use signed Union work tive and toxic substart bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full sures IF exposed or corr (show the label w involved, and take attendance. ures Remove victim to	ed above place expose ance. ubstance. are in perce e. Sheet is not orders, cus text for all H neerned: Ge here possible e precaution fresh air an	sure limit(s ent by we a guaran stomer inv -statemer t medical le). Ensur s to prote d keep at	ight unless ingredient is a ga tee of product specification of oices, or product specification its is displayed in section 16 advice/attention. If you feel u e that medical personnel are ct themselves. Show this sat rest in a position comfortable	or NPK value(s). NPK content is on sheets obtained from unwell, seek medical advice aware of the material(s)
Classification:         List of abbreviations and symbo         #: This substance has been as         M: M-factor         PBT: persistent, bioaccumulati         vPvB: very persistent and very         Composition comments         SECTION 4: First aid meas         General information         4.1. Description of first aid meas	Is that may be use asigned Union work to bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full sures IF exposed or cor (show the label w involved, and take attendance. ures Remove victim to centre or doctor/p Remove contamin	ed above place expose ance. ubstance. s are in perce e. Sheet is not s orders, cus text for all H neerned: Ge here possible precaution fresh air an hysician if y nated clothir	sure limit(s ent by we a guaran stomer inv -statemer t medical le). Ensur s to prote d keep at ou feel ur ng. Wash	ight unless ingredient is a ga tee of product specification of roices, or product specification its is displayed in section 16 advice/attention. If you feel of e that medical personnel are ct themselves. Show this sat rest in a position comfortable well.	or NPK value(s). NPK content is on sheets obtained from unwell, seek medical advice aware of the material(s) fety data sheet to the doctor in e for breathing. Call a poison r. If skin irritation occurs: Get
Classification:         List of abbreviations and symbo         #: This substance has been as         M: M-factor         PBT: persistent, bioaccumulati         vPvB: very persistent and very         Composition comments         SECTION 4: First aid meas         General information         4.1. Description of first aid meas         Inhalation	Is that may be use signed Union work bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full sures IF exposed or cor (show the label w involved, and take attendance. ures Remove victim to centre or doctor/p Remove contamin medical advice/at	ed above place expose ance. ubstance. s are in perce e. Sheet is not s orders, cus text for all H neerned: Ge here possible precaution fresh air an hysician if y nated clothir tention. Was eyes with p	sure limit(s ent by we a guaran stomer inv -statemer t medical le). Ensur s to prote d keep at ou feel ur ou feel ur og. Wash sh contar lenty of w	ight unless ingredient is a ga tee of product specification of roices, or product specification ts is displayed in section 16 advice/attention. If you feel of e that medical personnel are ct themselves. Show this sat	or NPK value(s). NPK content is on sheets obtained from unwell, seek medical advice aware of the material(s) fety data sheet to the doctor in e for breathing. Call a poison r. If skin irritation occurs: Get Remove contact lenses, if
Classification:         List of abbreviations and symbo         #: This substance has been as         M: M-factor         PBT: persistent, bioaccumulative         vPvB: very persistent and very         Composition comments         SECTION 4: First aid meas         General information         4.1. Description of first aid meas         Inhalation         Skin contact	Is that may be use signed Union work bioaccumulative s All concentrations percent by volum This Safety Data on specified sales supplier. The full sures IF exposed or cor (show the label w involved, and take attendance. ures Remove victim to centre or doctor/p Remove contamin medical advice/at	ed above place expose ance. ubstance. are in perce are in perce are in perce bet is not orders, cus text for all H incerned: Ge here possible precaution fresh air an hysician if y nated clothir tention. Was eyes with p to do. Conti	sure limit(s ent by we a guaran stomer inv -statemer t medical le). Ensur s to prote d keep at ou feel ur ou feel ur osh contarr lenty of w	ight unless ingredient is a gate of product specification of order specification of orders, or product specification to solve a state of the specification. If you feel use that medical personnel are of themselves. Show this sate rest in a position comfortable with plenty of soap and wate ninated clothing before reuse rater for at least 15 minutes. No. Get medical attention immodel attent	or NPK value(s). NPK content is on sheets obtained from unwell, seek medical advice aware of the material(s) fety data sheet to the doctor in e for breathing. Call a poison r. If skin irritation occurs: Get Remove contact lenses, if

 4.2. Most important symptoms and effects, both acute and delayed
 4.3. Indication of any immediate medical attention
 Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain.
 Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### **SECTION 5: Firefighting measures**

and special treatment needed

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	Fire may produce irritating, corrosive and/or toxic gases.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. 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, protect	ctive equipment and emergency procedures
For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders	Keep unnecessary personnel away. 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	Use water spray to reduce vapours or divert vapour cloud drift.
	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: Wipe up with absorbent material (e.g. cloth, fleece). 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.
CECTION 7. Handling and	

### **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 breathing mist/vapours. 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).
	Long term storage at temperatures above 36°C (100°F), and long term storage of opened containers, will cause the product to degrade. As the product degrades it can release harmful gases. Store below 36°C (100°F) and use opened containers within 30 days. Always use oldest first.
7.3. Specific end use(s)	Fertilizer Additive.

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

### 8.1. Control parameters

### Occupational exposure limits

Ireland. Occupational Exposure Limits

Components	Туре	Value	Form
N-methyl-2-pyrrolidone (CAS 872-50-4)	STEL	80 mg/m3	
		20 ppm	
	TWA	40 mg/m3	
		10 ppm	
Propylene glycol (CAS 57-55-6)	TWA	470 mg/m3	Total vapour and particulates.
		10 mg/m3	Particulate.
		150 ppm	Total vapour and particulates.

### 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

N-methyl-2-pyrrolidone	STEL	80 mg/m3
(CAS 872-50-4)		20 ppm
		40 mg/m3
		10 ppm
	No. 1919 Destruction of the state of the sta	

### **Biological limit values**

No biological exposure limits noted for the ingredient(s). Follow standard monitoring procedures.

# Recommended monitoring procedures

### Derived no effect levels (DNELs)

General	<b>Population</b>

Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94	317-64-3)		
Long-term, Systemic, Dermal	0.14 mg/kg	200	Effect on fertility
Long-term, Systemic, Inhalation	1.9 mg/m3	50	Effect on fertility
Long-term, Systemic, Oral	0.14 mg/kg	80	Effect on fertility
N-methyl-2-pyrrolidone (CAS 872-50-4)			
Long-term, Local, Inhalation	4.5 mg/m3	20	irritation (respiratory tract)
Long-term, Local, Oral	0.85 mg/kg bw/day	200	Neurotoxicity
Long-term, Systemic, Dermal	2.4 mg/kg bw/day	100	developmental toxicity / teratogenicity
Long-term, Systemic, Inhalation	3.6 mg/m3	25	developmental toxicity / teratogenicity
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
<u>Workers</u>			
Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94	317-64-3)		
Long-term, Systemic, Dermal	0.28 mg/kg	100	Effect on fertility
Long-term, Systemic, Inhalation	7.8 mg/m3	25	Effect on fertility
N-methyl-2-pyrrolidone (CAS 872-50-4)			
Long-term, Local, Inhalation	40 mg/m3	2	irritation (respiratory tract)
Long-term, Systemic, Dermal	4.8 mg/kg bw/day	50	developmental toxicity / teratogenicity
Long-term, Systemic, Inhalation	14.4 mg/m3	12.5	developmental toxicity / teratogenicity
Propylene glycol (CAS 57-55-6)			
Long-term, Local, Inhalation	10 mg/m3	9	Repeated dose toxicity
Long-term, Systemic, Inhalation	168 mg/m3	3	Repeated dose toxicity
dicted no effect concentrations (PNECs)			
Components	Value	Assessment factor	Notes
N-(n-butyl)-thiophosphoric triamide (CAS 94	317-64-3)		
Freshwater	0.28 mg/l	1000	
Marine water	0.028 mg/l	10000	

Sediment (marine water)	0.1096 mg/kg		
Soil STP	0.055 mg/kg 1 mg/l	10	
N-methyl-2-pyrrolidone (CAS 8	•	10	
Freshwater	,	50	
Marine water	0.25 mg/l 0.025 mg/l	500	
Sediment (freshwater)	1.09 mg/kg		
Sediment (marine water)	0.109 mg/kg		
Soil	0.07 mg/kg		
STP	10 mg/l	10	
Propylene glycol (CAS 57-55-6	6)		
Freshwater	260 mg/l	50	
Intermittent releases	183 mg/l		
Marine water	26 mg/l	500	
Sediment (freshwater) Sediment (marine water)	572 mg/kg 57.2 mg/kg		
Soil	50 mg/kg		
STP	20000 mg/l	1	
Exposure guidelines			
Ireland Exposure Limit Value	es: Skin designation		
N-methyl-2-pyrrolidone (C	AS 872-50-4)	Can be absorbed through the skin.	
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 ec	quipment	
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 safety glasses with side shields (or goggles).		
Skin protection			
- Hand protection	Wear appropriate chemical resi	istant gloves.	
- Other	Wear appropriate chemical resi	istant clothing. Use of an impervious apron is recommended	1.
Respiratory protection	Chemical respirator with organi	ic vapour cartridge and full facepiece.	
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 o	chemical properties		

### SECTION 9. Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Colour	Green.
Odour	Ammonia-like.
Odour threshold	0.1 ppm
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	81.1 °C (178.0 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

### Upper/lower flammability or explosive limits

Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.07
Solubility(ies)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Flammability	Does not support combustion at 86.1°C / 187°F
SECTION 10: Stability and	I 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	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong reducing agents. Strong oxidising agents.

# decomposition products SECTION 11: Toxicological information

10.6. Hazardous

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of	of exposure
Inhalation	May cause irritation to the respiratory system. 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. May cause respiratory irritation. Skin irritation. May cause redness and pain.

No hazardous decomposition products are known.

### 11.1. Information on toxicological effects

Acute toxicity		
Components	Species	Test Results
N-(n-butyl)-thiophosphoric	triamide (CAS 94317-64-3)	
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Wistar rat	> 2.1 mg/l, 4 hours
Oral		
LD50	Wistar rat	> 2000 mg/kg
N-methyl-2-pyrrolidone (C/	AS 872-50-4)	
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Inhalation		
Mist		
LC50	Rat	> 5.1 mg/l, 4 hours
Oral		
LD50	Rat	3605 mg/kg
Propylene glycol (CAS 57-55-6)		
Acute		
Dermal		
LD50	Rabbit	20800 mg/kg
Oral		
LD50	Rat	22000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Irritation Corrosion - Sk		
N-methyl-2-pyrrolidone (0	CAS 872-50-4)	Result: Slightly irritating Species: Rabbit
Serious eye damage/eye rritation	Causes serious eye damage.	
Eye		
N-methyl-2-pyrrolidone (0	CAS 872-50-4)	Result: Moderately irritating Species: Rabbit Observation Period: 14 days
Respiratory sensitisation	Due to partial or complete lack	<pre>&lt; of data the classification is not possible.</pre>
Skin sensitisation		<ul> <li>of data the classification is not possible.</li> </ul>
Germ cell mutagenicity		<ul> <li>of data the classification is not possible.</li> </ul>
Carcinogenicity		<pre>&lt; of data the classification is not possible.</pre>
Reproductive toxicity	May damage fertility or the un	-
Specific target organ toxicity - single exposure	May cause respiratory irritation	n.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack	< of data the classification is not possible.
Aspiration hazard	Not an aspiration hazard.	
· Mixture versus substance nformation	No information available.	
Other information	Not available.	
SECTION 12: Ecological in	nformation	
12.1. Toxicity	Based on available data, the c environment.	classification criteria are not met for hazardous to the aquatic
Components	Species	Test Results

	Opecies	restitesuits
amide (CAS 9431	17-64-3)	
EC50	Selenastrum capricornutum	280 mg/l, 96 hours
EC50	Daphnia magna	290 mg/l, 48 hours
LC50	Daphnia	350 mg/l, 48 hours
LC50	Lepomis macrochirus	1140 mg/l, 96 hours
872-50-4)		
EC50	Scenedesmus subspicatus	> 500 mg/l, 72 Hours
EC50	Daphnia magna	> 1000 mg/l, 24 Hours
LC50	Oncorhynchus mykiss	> 500 mg/l, 96 Hours
NOEC	Daphnia magna	12.5 mg/l, 21 days
The produ	uct is not readily biodegradable.	
	EC50 EC50 LC50 872-50-4) EC50 EC50 LC50 NOEC	amide (CAS 94317-64-3) EC50 Selenastrum capricornutum EC50 Daphnia magna LC50 Daphnia LC50 Lepomis macrochirus 872-50-4) EC50 Scenedesmus subspicatus EC50 Daphnia magna LC50 Oncorhynchus mykiss

12.3. Bioaccumulative potential	
Partition coefficient n-octanol/water (log Kow) N-methyl-2-pyrrolidone (CAS a	872-50-4) -0.54
Propylene glycol (CAS 57-55-	
<b>Bioconcentration factor (BCF)</b>	Not available.
12.4. Mobility in soil	This product is water soluble and may disperse in soil.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
SECTION 13: Disposal cor	nsiderations
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 (see: Disposal instructions).
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.
	The Wests and should be assigned in discussion between the user, the producer and the wests

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

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of **Disposal methods/information** 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. - 14.6.: Not regulated as dangerous goods.

RID 14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### ΙΑΤΑ

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

### Not established. 14.7. Transport in bulk

according to Annex II of MARPOL 73/78 and the IBC

### Code

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

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

### **EU** regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I 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 N-methyl-2-pyrrolidone (CAS 872-50-4)

### **Authorisations**

# Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended Not listed.

NOT IISTED.

### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended N-methyl-2-pyrrolidone (CAS 872-50-4)

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.

### Other EU regulations

Directive 2012/18/EU on	major accident hazards involving dangerous substances, 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

References	DNEL: Derived No-Effect Level. EC50: Effective Concentration, 50%. LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%. PNEC: Predicted No-Effect Concentration. ECHA CHEM
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 H-statements not written out in full under	
Sections 2 to 15	<ul> <li>H315 Causes skin irritation.</li> <li>H318 Causes serious eye damage.</li> <li>H319 Causes serious eye irritation.</li> <li>H335 May cause respiratory irritation.</li> <li>H360D May damage the unborn child.</li> <li>H361 Suspected of damaging fertility or the unborn child.</li> </ul>
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 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.
	applicable Government regulation(s). This SDS may not be used as a commercial specifical sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is as to the accuracy or comprehensiveness of the above data and safety information, nor is authorization given or implied to practice any patented invention without a license. Addition information may be needed to evaluate other uses of the product, including use of the product 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 me suggest that use of the product in a given application will necessarily result in any exposure 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 responsible assumed by vendor for any damage or injury resulting from failure to adhere to recommuses, or from any hazards inherent to the product. Purchasers and users assume all risk o storage and handling of the product in compliance with applicable federal, state and local I regulations. Purchasers and users of the product should explicitly advise their employees,