

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : MicroVue Bone Klotho Assay EIA  
 Product code : 8050

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

Recommended use : For research use only, For medical diagnostic use.  
 Restrictions on use : Restricted to professional users, Professional Use of Medical Devices.

#### 1.3. Supplier

##### Manufacturer

Diagnostic Hybrids, Inc. a subsidiary of Quidel Corporation  
 2005 East State Street, Suite 100  
 Athens, 45701 - USA  
 T 1.800.874.1517 - F 1.740.592.9820  
[gehs@quidelortho.com](mailto:gehs@quidelortho.com) - [quidel.com](http://quidel.com)

#### 1.4. Emergency telephone number

Emergency number : 1.866.519.4752

### SECTION 2: Hazard(s) identification




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




##### GHS US classification

Components	GHS US classification
Stop Solution (12 mL)	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
20X Wash Solution Concentrate (50 mL)	Skin Sens. 1, H317
Hydrating Reagent (25 mL)	Skin Sens. 1, H317
TMB Substrate (12 mL)	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 1B, H360

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Components	Pictograms	Signal word	Hazard statements	Precautionary statements
<b>Stop Solution (12 mL)</b>		Danger	H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage	P260 - Do not breathe mist, spray. P280 - Wear lab coat, safety glasses, and gloves. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 - Specific treatment: Seek medical attention if ill effect develops
<b>20X Wash Solution Concentrate (50 mL)</b>		Warning	H317 - May cause an allergic skin reaction	P261 - Avoid breathing mist, spray. P280 - Wear lab coat, safety glasses, and gloves. P302+P352 - If on skin: Wash skin thoroughly with mild soap and water P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
<b>Hydrating Reagent (25 mL)</b>		Warning	H317 - May cause an allergic skin reaction	P280 - Wear lab coat, safety glasses, and gloves. P302+P352 - If on skin: Wash skin thoroughly with mild soap and water P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

<b>TMB Substrate (12 mL)</b>	  	Danger	H225 - Highly flammable liquid and vapor H315 - Causes skin irritation H318 - Causes serious eye damage H360 - May damage fertility or the unborn child	P264 - Wash hands thoroughly after handling P280 - Wear lab coat, safety glasses, and gloves. P302+P352 - If on skin: Wash skin thoroughly with mild soap and water P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 - Specific treatment: Seek medical attention if ill effect develops P332+P313 - If skin irritation occurs: Get medical advice/attention. P501 - Dispose of contents/container: Dispose in a safe manner in accordance with local/national regulations
------------------------------	---	--------	--	--

### SECTION 3: Composition/Information on ingredients

Name	Chemical name	CAS #	%	GHS US classification
MicroVue Bone Klotho Assay EIA Standards and Controls	ProClin® 300	55965-84-9	0.035	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Stop Solution (12 mL)	hydrochloric acid	7647-01-0	4	Met. Corr. 1, H290 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335
20X Wash Solution Concentrate (50 mL)	disodium hydrogenorthophosphate	7558-79-4	2.53	Acute Tox. 3 (Inhalation:dust,mist), H331
20X Wash Solution Concentrate (50 mL)	ProClin® 300	55965-84-9	0.037	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Specimen Diluent	Methylisothiazolone	26172-54-3	0.02	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314 Skin Sens. 1A, H317 Aquatic Chronic 1, H410
Hydrating Reagent (25 mL)	ProClin® 300	55965-84-9	0.035	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
TMB Substrate (12 mL)	1-ethylpyrrolidin-2-one	2687-91-4	1 - 5	Flam. Liq. 4, H227 Repr. 1B, H360 STOT RE 2, H373

TMB Substrate (12 mL)	1-methyl-2-pyrrolidone	872-50-4	1 – 10	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360 STOT SE 3, H335
TMB Substrate (12 mL)	acetone	67-64-1	1 – 10	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

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

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

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

- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.
- Immediate medical attention and special treatment, if necessary : Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

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

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

No additional information available

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

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

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

##### 6.1.2. For emergency responders

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

#### 6.2. Environmental precautions

- Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.
- Reference to other sections : For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

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

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

hydrochloric acid (7647-01-0)		
OSHA	OSHA PEL C	7 mg/m <sup>3</sup>
OSHA	OSHA PEL C [ppm]	5 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
1-ethylpyrrolidin-2-one (2687-91-4)		
ACGIH	BEI	Parameter: 5-hydroxy-N-ethyl-2-pyrrolidone (5-HNEP) (without hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: Nq
acetone (67-64-1)		
ACGIH	ACGIH OEL TWA [ppm]	250 ppm
ACGIH	ACGIH OEL STEL [ppm]	500 ppm
ACGIH	BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift - Notations: Ns
OSHA	OSHA PEL TWA [1]	2400 mg/m <sup>3</sup>
OSHA	OSHA PEL TWA [2]	1000 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
1-methyl-2-pyrrolidone (872-50-4)		
ACGIH	BEI	100 mg/l Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone - Medium: urine - Sampling time: End of shift

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Materials for protective clothing:

Lab coat

##### Hand protection:

Wear protective gloves. Wash your hands

##### Eye protection:

Safety glasses

**Respiratory protection:**

[In case of inadequate ventilation] wear respiratory protection.

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



**Other information:**

Do not eat, drink or smoke when using this product.

### SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: EIA Kit
Color	: Clear
Odor	: Mild
Odor threshold	: No data available
pH	: ≤ 1 Stop Solution
pH	: 5.8 – 6.6 % TMB Substrate, 20X Wash Solution Concentrate
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Metals.

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

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

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
LD50 oral rat	66 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Calculated by reference to active substance, Oral, 14 day(s))
LD50 dermal rat	> 141 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.17 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Calculated by reference to active substance, Inhalation (dust), 14 day(s))
ATE US (oral)	66 mg/kg body weight
ATE US (dermal)	50 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h
<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
LD50 oral rat	> 2000 mg/kg body weight (OECD 420: Acute Oral toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.83 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
ATE US (dust, mist)	0.5 mg/l/4h
<b>Methylisothiazolone (26172-54-3)</b>	
LD50 oral rat	175 mg/kg
LD50 dermal rat	246 mg/kg
LC50 Inhalation - Rat	0.11 mg/l 4 hr
ATE US (oral)	175 mg/kg body weight
ATE US (dermal)	246 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.11 mg/l/4h
ATE US (dust, mist)	0.11 mg/l/4h
<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
LD50 oral rat	3200 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	> 5.1 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))
ATE US (oral)	3200 mg/kg body weight
<b>acetone (67-64-1)</b>	
LD50 oral rat	5800 mg/kg (Rat, Female, Experimental value, Oral, 14 day(s))

<b>acetone (67-64-1)</b>	
LD50 dermal rabbit	> 15800 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	132 mg/l (3 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	5800 mg/kg body weight
ATE US (vapors)	132 mg/l/4h
ATE US (dust, mist)	132 mg/l/4h

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LD50 oral rat	4150 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5.1 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	4150 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.  
 Serious eye damage/irritation : Causes serious eye irritation.  
 Respiratory or skin sensitization : May cause an allergic skin reaction.  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Not classified

<b>hydrochloric acid (7647-01-0)</b>	
IARC group	3 - Not classifiable

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
NOAEL (chronic,oral,animal/male,2 years)	≈ 89 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity), Remarks on results: other:
NOAEL (chronic,oral,animal/female,2 years)	≈ 221 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity), Remarks on results: other:

Reproductive toxicity : May damage fertility or the unborn child.  
 STOT-single exposure : Not classified

<b>hydrochloric acid (7647-01-0)</b>	
STOT-single exposure	May cause respiratory irritation.

<b>acetone (67-64-1)</b>	
STOT-single exposure	May cause drowsiness or dizziness.

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
LOAEL (dermal,rat/rabbit,90 days)	0.525 mg/kg body weight Animal: rat, Animal sex: male, Guideline: EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
NOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)



<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
LOAEC (inhalation, rat, vapor, 90 days)	0.2 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity: 90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
NOAEL (oral, rat, 90 days)	100 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapor, 90 days)	0.06 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity: 90-Day Study), Guideline: EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.08 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study), Guideline: EU Method B.8 (Subacute Inhalation Toxicity: 28-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LOAEL (dermal, rat/rabbit, 90 days)	1653 mg/kg body weight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL (dermal, rat/rabbit, 90 days)	826 mg/kg body weight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified  
 Viscosity, kinematic : No data available  
 Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.  
 Symptoms/effects after eye contact : Eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
LC50 - Fish [1]	0.19 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	0.007 mg/l (48 h, Acartia tonsa, Salt water, Experimental value, GLP)
LC50 - Fish [2]	0.28 mg/l Test organisms (species): Lepomis macrochirus
NOEC (chronic)	0.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.098 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '28 d'

<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

<b>Methylisothiazolone (26172-54-3)</b>	
LC50 - Fish [1]	4.77 mg/l Oncorhynchus mykiss - 96 hr
LC50 - Other aquatic organisms [1]	2.33 mg/l Daphnia magna (Water Flea) - 48 hr
EC50 - Crustacea [1]	2.33 mg/l Test organisms (species): Daphnia magna

<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
LC50 - Fish [1]	> 465 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 104 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
LOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'



<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
NOEC (chronic)	12.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
<b>acetone (67-64-1)</b>	
LC50 - Fish [1]	6210 – 8120 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Measured concentration)
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LC50 - Fish [1]	> 500 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 1000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
ErC50 algae	600.5 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
LOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	12.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>hydrochloric acid (7647-01-0)</b>	
Persistence and degradability	Biodegradability: not applicable.
<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
Persistence and degradability	Readily biodegradable in water.
<b>acetone (67-64-1)</b>	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.92 g O <sub>2</sub> /g substance
ThOD	2.2 g O <sub>2</sub> /g substance
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.07 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.56 g O <sub>2</sub> /g substance
ThOD	1.9 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
BCF - Fish [1]	41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	0.75 (24 °C)
Bioaccumulative potential	Not established.

<b>hydrochloric acid (7647-01-0)</b>	
Bioaccumulative potential	Does not contain bioaccumulative component(s).
<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
Bioaccumulative potential	Not bioaccumulative.
<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	-0.2 (Experimental value, EU Method A.8: Partition Coefficient, 23 °C)
Bioaccumulative potential	Not bioaccumulative.
<b>acetone (67-64-1)</b>	
BCF - Fish [1]	0.69 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	-0.46 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

<b>reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)</b>	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.81 - 1 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
<b>hydrochloric acid (7647-01-0)</b>	
Ecology - soil	No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.
<b>disodium hydrogenorthophosphate (7558-79-4)</b>	
Ecology - soil	No (test)data on mobility of the substance available.
<b>1-ethylpyrrolidin-2-one (2687-91-4)</b>	
Surface tension	69 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.6 (log Koc, PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for adsorption in soil. Highly mobile in soil.
<b>acetone (67-64-1)</b>	
Surface tension	23.3 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 - 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.87 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Regional legislation (waste) : Disposal must be done according to official regulations.
- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Sewage disposal recommendations : Disposal must be done according to official regulations.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### MicroVue Klotho Assay

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

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS No 55965-84-9	0.107%
hydrochloric acid	CAS No 7647-01-0	4%
disodium hydrogenorthophosphate	CAS No 7558-79-4	2.53%
Methylisothiazolone	CAS No 26172-54-3	0.02%
1-ethylpyrrolidin-2-one	CAS No 2687-91-4	1 - 5%
acetone	CAS No 67-64-1	1 - 10%
1-methyl-2-pyrrolidone	CAS No 872-50-4	1 - 10%
Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S		
1-methyl-2-pyrrolidone	CAS No 872-50-4	1 - 10%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

hydrochloric acid	CAS No 7647-01-0	4%
1-methyl-2-pyrrolidone	CAS No 872-50-4	1 - 10%

##### hydrochloric acid (7647-01-0)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

##### disodium hydrogenorthophosphate (7558-79-4)

CERCLA RQ	5000 lb
-----------	---------

##### 1-ethylpyrrolidin-2-one (2687-91-4)

EPA TSCA Regulatory Flag	SP - SP - indicates a substance that is identified in a proposed Significant New Use Rule.
--------------------------	--

##### acetone (67-64-1)

CERCLA RQ	5000 lb
-----------	---------

### 1-methyl-2-pyrrolidone (872-50-4)

EPA TSCA Regulatory Flag

R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.

## 15.2. International regulations

### CANADA

#### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)

Listed on the Canadian DSL (Domestic Substances List)

#### hydrochloric acid (7647-01-0)

Listed on the Canadian DSL (Domestic Substances List)

#### disodium hydrogenorthophosphate (7558-79-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Methylisothiazolone (26172-54-3)

Listed on the Canadian DSL (Domestic Substances List)

#### 1-ethylpyrrolidin-2-one (2687-91-4)

Listed on the Canadian DSL (Domestic Substances List)

#### acetone (67-64-1)

Listed on the Canadian DSL (Domestic Substances List)

#### 1-methyl-2-pyrrolidone (872-50-4)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

#### hydrochloric acid (7647-01-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
 Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### disodium hydrogenorthophosphate (7558-79-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
 Listed on INSQ (Mexican National Inventory of Chemical Substances)

## 15.3. US State regulations

**⚠ WARNING:** This product can expose you to 1-methyl-2-pyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

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

### Indication of changes:

Regulatory Review. Updated SDS template.

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