

# DECIMATE

## Safety Data Sheet

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

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : DECIMATE  
Product code : M29162

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

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

JR Simplot Company  
P.O. Box 70013  
Boise, ID 83707  
T 1-208-336-2110

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

### SECTION 2: Hazard(s) identification

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

##### GHS-US classification

Corrosive to metals, Category 1 H290  
Acute toxicity (oral), Category 4 H302  
Skin corrosion/irritation, Category 1B H314  
Serious eye damage/eye irritation, Category 1 H318

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger  
Contains : 1-butanol; Monocarbamide dihydrogen sulfate  
Hazard statements (GHS-US) : H290 - May be corrosive to metals  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
Precautionary statements (GHS-US) : P234 - Keep only in original container  
P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
P264 - Wash hands, forearms and face thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
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  
P310 - Immediately call a poison center/doctor/...  
P321 - Specific treatment (see supplemental first aid instruction on this label)  
P330 - Rinse mouth  
P363 - Wash contaminated clothing before reuse  
P390 - Absorb spillage to prevent material damage  
P405 - Store locked up  
P406 - Store in a corrosion resistant container with a resistant inner liner  
P501 - Dispose of contents/container to ...in accordance with local/regional/national regulations

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### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Monocarbamide dihydrogen sulfate	(CAS No) 21351-39-3	<= 40	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Dermal), H310 Skin Corr. 1A, H314
1-butanol	(CAS No) 71-36-3	<= 1.5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336
ethylene glycol	(CAS No) 107-21-1	<= 0.5	Acute Tox. 4 (Oral), H302
Proprietary			Not classified

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Reactivity	: Flammable hydrogen may be produced on prolonged contact with metals such as: aluminum, tin, lead and zinc.
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### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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### SECTION 6: Accidental release measures

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

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

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Absorb spillage to prevent material damage.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

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

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Packaging materials : Store in a corrosion resistant container with a resistant inner liner.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (Ethylene glycol; USA; Momentary value; TLV - Adopted Value)
1-butanol (71-36-3)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	20 ppm
Proprietary		
Not applicable		
Monocarbamide dihydrogen sulfate (21351-39-3)		
Not applicable		

#### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

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Other information : Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Yellow
Odour	: No data available on odour
Odour threshold	: No data available
pH	: No data available
pH solution	: 1.8 - 2.2 .5% solution
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 94 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: 1.2 - 1.3
Relative vapour density at 20 °C	: No data available
Solubility	: Soluble. Water: Solubility in water of component(s) of the mixture : • ethylene glycol: Complete • 1-butanol: 8 g/100ml
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Flammable hydrogen may be produced on prolonged contact with metals such as: aluminum, tin, lead and zinc.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Flammable hydrogen may be produced on prolonged contact with metals such as: aluminum, tin, lead and zinc.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

Strong acids. Strong bases. metals. May be corrosive to metals. Strong oxidizers. Aluminum. Lead. zinc.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

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<b>DECIMATE</b>	
ATE US (oral)	500.000 mg/kg bodyweight
<b>ethylene glycol (107-21-1)</b>	
LD50 oral rat	> 5000 mg/kg (Rat; Literature study)
ATE US (oral)	500.000 mg/kg bodyweight
<b>1-butanol (71-36-3)</b>	
LD50 oral rat	790 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature; 2293 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	3400 mg/kg (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; 3430 mg/kg bodyweight; Rabbit)
LC50 inhalation rat (mg/l)	24 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat)
ATE US (oral)	790.000 mg/kg bodyweight
ATE US (dermal)	3400.000 mg/kg bodyweight
ATE US (gases)	8000.000 ppmv/4h
ATE US (vapours)	24.000 mg/l/4h
ATE US (dust,mist)	24.000 mg/l/4h
<b>Monocarbamide dihydrogen sulfate (21351-39-3)</b>	
LD50 oral rat	1200 mg/kg
LD50 dermal rat	0
LD50 dermal rabbit	> 2 g/kg
LC50 inhalation rat (ppm)	> 10.8 ppm
ATE US (oral)	1200.000 mg/kg bodyweight
ATE US (dermal)	0.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>ethylene glycol (107-21-1)</b>	
EC50 Daphnia 1	> 10000 mg/l (EC50; 24 h)
LC50 fish 2	40761 mg/l (LC50; 96 h; Salmo gairdneri)
<b>1-butanol (71-36-3)</b>	
LC50 fish 1	1376 mg/l (96 h; Pimephales promelas; GLP)
LC50 other aquatic organisms 1	1200 mg/l (48 h; Xenopus laevis)
EC50 Daphnia 1	1328 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	2300 mg/l (96 h; Alburnus alburnus)
EC50 Daphnia 2	1880 mg/l (24 h; Daphnia magna)
Threshold limit other aquatic organisms 1	1200 mg/l (48 h; Xenopus laevis; Toxicity test)

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<b>1-butanol (71-36-3)</b>	
Threshold limit other aquatic organisms 2	280 mg/l (Pseudomonas putida)
Threshold limit algae 1	350 mg/l (Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	100 mg/l (192 h; Microcystis aeruginosa)

### 12.2. Persistence and degradability

<b>DECIMATE</b>	
Persistence and degradability	Not established.
<b>ethylene glycol (107-21-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not established.
Biochemical oxygen demand (BOD)	0.47 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.24 g O <sub>2</sub> /g substance
ThOD	1.29 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.36
<b>1-butanol (71-36-3)</b>	
Persistence and degradability	Readily biodegradable in water. Low potential for adsorption in soil. Photolysis in the air. Not established.
Biochemical oxygen demand (BOD)	1.1 - 1.92 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.46 g O <sub>2</sub> /g substance
ThOD	2.59 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.33 - 0.79 % ThOD
<b>Proprietary</b>	
Persistence and degradability	Not established.
<b>Monocarbamide dihydrogen sulfate (21351-39-3)</b>	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

<b>DECIMATE</b>	
Bioaccumulative potential	Not established.
<b>ethylene glycol (107-21-1)</b>	
BCF fish 1	10 (BCF; 72 h)
BCF other aquatic organisms 1	0.21 - 0.6 (BCF)
BCF other aquatic organisms 2	190 (BCF; 24 h)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.
<b>1-butanol (71-36-3)</b>	
BCF other aquatic organisms 1	3.16
Log Pow	1 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
<b>Proprietary</b>	
Bioaccumulative potential	Not established.
<b>Monocarbamide dihydrogen sulfate (21351-39-3)</b>	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

<b>ethylene glycol (107-21-1)</b>	
Surface tension	0.048 N/m (20 °C)
<b>1-butanol (71-36-3)</b>	
Surface tension	0.025 N/m (20 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

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### 12.5. Other adverse effects

- Effect on the global warming : No known ecological damage caused by this product.
- Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ..
- Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN1760 Corrosive liquids, n.o.s. (Contains monocarbamide dihydrogen sulfate), 8, II
- UN-No.(DOT) : UN1760
- Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.  
Contains monocarbamide dihydrogen sulfate
- Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Hazard labels (DOT) : 8 - Corrosive



- Packing group (DOT) : II - Medium Danger
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242
- DOT Symbols : G - Identifies PSN requiring a technical name
- DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized  
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized  
T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively  
TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded
- Transport/Additional information : 40 - Stow "clear of living quarters"
- Emergency Response Guide (ERG) Number : 154

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Other information : No supplementary information available.

### TDG

No additional information available

### Transport by sea

UN-No. (IMDG) : 1760  
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S.  
Class (IMDG) : 8 - Corrosive substances  
Packing group (IMDG) : II - substances presenting medium danger

### Air transport

UN-No. (IATA) : 1760  
Proper Shipping Name (IATA) : Corrosive liquid, n.o.s.  
Class (IATA) : 8 - Corrosives  
Packing group (IATA) : II - Medium Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

1-butanol	CAS No 71-36-3	<= 1.5%
Proprietary	CAS No	%

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.

ethylene glycol	CAS No 107-21-1	<= 0.5%
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#### ethylene glycol (107-21-1)

EPA Labeling Requirements	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA
CERCLA RQ	5000 lb

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

#### ethylene glycol (107-21-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	

#### ethylene glycol (107-21-1)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List



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### SECTION 16: Other information

Other information : None.

Full text of H-statements:

H226	Flammable liquid and vapour
H290	May be corrosive to metals
H302	Harmful if swallowed
H310	Fatal 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
H336	May cause drowsiness or dizziness

SDS US (GHS HazCom 2012)

*Disclaimer: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.*