

# SAFETY DATA SHEET



3100 OFFGEL Low Res Kit - pH 3-10, Part Number 5188-6425

## Section 1. Identification

### 1.1 Product identifier

**Product name** : 3100 OFFGEL Low Res Kit - pH 3-10, Part Number 5188-6425  
**Part No. (Chemical Kit)** : 5188-6425  
**Part No.** : OFFGEL Ampholyte 3-10 5188-6437  
 Glycerol 50 percent 5188-6440  
 Thiourea, Part Number 5188-6436 5188-6436  
 Mineral Oil 5188-6443  
 Urea 5188-6435  
 Dithiotreitol 5188-6439

**Validation date** : 5/28/2014.

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

**Material uses** : Analytical chemistry.  
 OFFGEL Ampholyte 3-10 1 ml vials  
 Glycerol 50 percent 10 ml  
 Thiourea, Part Number 5188-6436 9.1 g  
 Mineral Oil 50 ml  
 Urea 25.2 g  
 Dithiotreitol 0.6 g

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

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
 Logistics Center - Americas  
 500 Ships Landing Way  
 New Castle, Delaware 19720  
 800-227-9770

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** : OFFGEL Ampholyte 3-10 While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Glycerol 50 percent This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Thiourea, Part Number 5188-6436 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Mineral Oil This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Section 2. Hazards identification

Urea	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Dithiotreitol	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

#### Glycerol 50 percent

H320	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### Thiourea, Part Number

##### 5188-6436

H301	ACUTE TOXICITY (oral) - Category 3
H320	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H351	CARCINOGENICITY - Category 2
H361	TOXIC TO REPRODUCTION (Unborn child) - Category 2

#### Urea

Comb. Dusts	COMBUSTIBLE DUSTS
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#### Dithiotreitol

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### 2.2 GHS label elements

#### Hazard pictograms



#### Signal word

:	OFFGEL Ampholyte 3-10	No signal word.
	Glycerol 50 percent	Warning
	Thiourea, Part Number 5188-6436	Danger
	Mineral Oil	No signal word.
	Urea	Warning
	Dithiotreitol	Warning

#### Hazard statements

:	OFFGEL Ampholyte 3-10	No known significant effects or critical hazards.
	Glycerol 50 percent	H320 - Causes eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
	Thiourea, Part Number 5188-6436	H301 - Toxic if swallowed. H320 - Causes eye irritation. H361 - Suspected of damaging the unborn child. H351 - Suspected of causing cancer.
	Mineral Oil	No known significant effects or critical hazards.
	Urea	No Code(s) - May form combustible dust concentrations in air.
	Dithiotreitol	H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H335 - May cause respiratory irritation.

### Precautionary statements

## Section 2. Hazards identification

<b>Prevention</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent	Not applicable. P280 - Wear eye or face protection. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
	Thiourea, Part Number 5188-6436	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear eye or face protection. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
	Mineral Oil Urea Dithiotreitol	Not applicable. Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing dust. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
<b>Response</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent	Not applicable. P314 - Get medical attention if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	Thiourea, Part Number 5188-6436	P308 + P313 - IF exposed or concerned: Get medical attention. P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	Mineral Oil Urea Dithiotreitol	Not applicable. Not applicable. P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

## Section 2. Hazards identification

		Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<b>Storage</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Not applicable. Not applicable. P405 - Store locked up. Not applicable. Not applicable. P405 - Store locked up.
<b>Disposal</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent  Thiourea, Part Number 5188-6436  Mineral Oil Urea Dithiotreitol	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil  Urea  Dithiotreitol	None known. None known. None known. Avoid contact with skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Prevent dust accumulation. None known.
<b>2.3 Other hazards</b>		
<b>Hazards not otherwise classified</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil  Urea  Dithiotreitol	None known. None known. None known. Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation. Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Substance Mixture Substance Substance Substance Substance
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## Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
<b>OFFGEL Ampholyte 3-10</b> OFFGEL Ampholyte 3-10	60 - 100	-
<b>Glycerol 50 percent</b> Glycerol	30 - 60	56-81-5
<b>Thiourea, Part Number 5188-6436</b> Thiourea	60 - 100	62-56-6
<b>Mineral Oil</b> White mineral oil (petroleum)	60 - 100	8042-47-5
<b>Urea</b> Urea	60 - 100	57-13-6
<b>Dithiotreitol</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	60 - 100	3483-12-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: OFFGEL Ampholyte 3-10	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Glycerol 50 percent	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
	Thiourea, Part Number 5188-6436	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Mineral Oil	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
	Urea	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	Dithiotreitol	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

## Section 4. First aid measures

<b>Inhalation</b>	: OFFGEL Ampholyte 3-10	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Glycerol 50 percent	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Thiourea, Part Number 5188-6436	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Mineral Oil	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Urea	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Dithiotreitol	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If

## Section 4. First aid measures

<b>Skin contact</b>	: OFFGEL Ampholyte 3-10	necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Glycerol 50 percent	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Thiourea, Part Number 5188-6436	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Mineral Oil	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Urea	Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Dithiotreitol	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: OFFGEL Ampholyte 3-10	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Glycerol 50 percent	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Thiourea, Part Number 5188-6436	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh



## Section 4. First aid measures

	air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Mineral Oil	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Urea	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Dithiotreitol	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects



## Section 4. First aid measures

<b>Eye contact</b>	: OFFGEL Ampholyte 3-10	No known significant effects or critical hazards.
	Glycerol 50 percent	Causes eye irritation.
	Thiourea, Part Number 5188-6436	Causes eye irritation.
	Mineral Oil	No known significant effects or critical hazards.
	Urea	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	Dithiotreitol	Causes serious eye irritation.
<b>Inhalation</b>	: OFFGEL Ampholyte 3-10	No known significant effects or critical hazards.
	Glycerol 50 percent	No known significant effects or critical hazards.
	Thiourea, Part Number 5188-6436	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Mineral Oil	No known significant effects or critical hazards.
	Urea	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	Dithiotreitol	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	: OFFGEL Ampholyte 3-10	May cause respiratory irritation.
	Glycerol 50 percent	No known significant effects or critical hazards.
	Thiourea, Part Number 5188-6436	No known significant effects or critical hazards.
	Mineral Oil	No known significant effects or critical hazards.
	Urea	Defatting to the skin. May cause skin dryness and irritation.
	Dithiotreitol	No known significant effects or critical hazards.
<b>Ingestion</b>	: OFFGEL Ampholyte 3-10	Causes skin irritation.
	Glycerol 50 percent	No known significant effects or critical hazards.
	Thiourea, Part Number 5188-6436	May be irritating to mouth, throat and stomach.
	Mineral Oil	Toxic if swallowed. May be irritating to mouth, throat and stomach.
	Urea	No known significant effects or critical hazards.
	Dithiotreitol	No known significant effects or critical hazards.
		Harmful if swallowed. Irritating to mouth, throat and stomach.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	Adverse symptoms may include the following: irritation watering redness
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: irritation watering redness
	Mineral Oil	No specific data.
	Urea	Adverse symptoms may include the following: irritation redness
	Dithiotreitol	Adverse symptoms may include the following: pain or irritation watering redness

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<b>Inhalation</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	No specific data.
	Urea	Adverse symptoms may include the following: respiratory tract irritation coughing
	Dithiotreitol	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Skin contact</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	Adverse symptoms may include the following: irritation dryness cracking
	Urea	No specific data.
	Dithiotreitol	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	No specific data.
	Urea	No specific data.
	Dithiotreitol	No specific data.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	: OFFGEL Ampholyte 3-10	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Glycerol 50 percent	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Thiourea, Part Number 5188-6436	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Mineral Oil	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Urea	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Dithiotreitol	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## Section 4. First aid measures

<b>Specific treatments</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: OFFGEL Ampholyte 3-10  Glycerol 50 percent  Thiourea, Part Number 5188-6436  Mineral Oil  Urea  Dithiotreitol	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray (fog). Use dry chemical powder. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	None known. None known. None known. Do not use water jet. Do not use water jet. None known.

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

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: OFFGEL Ampholyte 3-10	In a fire or if heated, a pressure increase will occur and the container may burst.
	Glycerol 50 percent	In a fire or if heated, a pressure increase will occur and the container may burst.
	Thiourea, Part Number 5188-6436	No specific fire or explosion hazard.
	Mineral Oil	In a fire or if heated, a pressure increase will occur and the container may burst.
	Urea	Fine dust clouds may form explosive mixtures with air.
<b>Hazardous thermal decomposition products</b>	Dithiotreitol	No specific fire or explosion hazard.
	: Decomposition products may include the following materials:	
	carbon dioxide	
	carbon monoxide	
	nitrogen oxides	
	sulfur oxides	

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: OFFGEL Ampholyte 3-10	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Glycerol 50 percent	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Thiourea, Part Number 5188-6436	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Mineral Oil	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Urea	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	Dithiotreitol	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	: OFFGEL Ampholyte 3-10	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Glycerol 50 percent	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Thiourea, Part Number 5188-6436	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Mineral Oil	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive

## Section 5. Fire-fighting measures

Urea	pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Dithiotreitol	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: OFFGEL Ampholyte 3-10	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Glycerol 50 percent	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Thiourea, Part Number 5188-6436	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Mineral Oil	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Urea	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Dithiotreitol	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

OFFGEL Ampholyte 3-10	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Glycerol 50 percent	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Thiourea, Part Number 5188-6436	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Mineral Oil	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Urea	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Dithiotreitol	Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	:	OFFGEL Ampholyte 3-10	Put on appropriate personal protective equipment (see Section 8).
		Glycerol 50 percent	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Thiourea, Part Number 5188-6436	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Mineral Oil	Put on appropriate personal protective equipment (see Section 8).
		Urea	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and



## Section 7. Handling and storage

avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Dithiotreitol

### Advice on general occupational hygiene

- : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

- : OFFGEL Ampholyte 3-10

Store between the following temperatures: 4 to 8°C (39.2 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Glycerol 50 percent

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Thiourea, Part Number 5188-6436

Store in accordance with local regulations. Store in original container protected from direct sunlight



## Section 7. Handling and storage

	in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Mineral Oil	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Urea	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Dithiotreitol	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

#### Recommendations

OFFGEL Ampholyte 3-10	Industrial applications, Professional applications.
Glycerol 50 percent	Industrial applications, Professional applications.
Thiourea, Part Number 5188-6436	Industrial applications, Professional applications.
Mineral Oil	Industrial applications, Professional applications.
Urea	Industrial applications, Professional applications.
Dithiotreitol	Industrial applications, Professional applications.

#### Industrial sector specific solutions

: Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>Glycerol 50 percent</b> Glycerol	<b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Mineral Oil</b> White mineral oil (petroleum)	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
<b>Urea</b> Urea	<b>AIHA WEEL (United States, 10/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.

### 8.2 Exposure controls

#### Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

##### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

##### Skin protection

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Liquid. [Viscous liquid.] Liquid. Solid. [Crystals.] Liquid. [Oily liquid.] Solid. [Crystals. / Powder. / Granular solid.] Solid.
<b>Color</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Colorless to light yellow. Not available. White. Colorless. White. Not available.
<b>Odor</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Odorless. Not available. Not available. Not available. Odorless. / Ammoniacal. Not available.
<b>Odor threshold</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Not available. Not available. Not available. Not available. Not available. Not available.
<b>pH</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	Not available. Not available. Not available. Not available. 7.2 [Conc. (% w/w): 10%] 4.3 [Conc. (% w/w): 5%]

## Section 9. Physical and chemical properties

<b>Melting point</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	-60 to -9°C (-76 to 15.8°F)
	Urea	134°C (273.2°F)
	Dithiotreitol	42 to 43°C (107.6 to 109.4°F)
<b>Boiling point</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	179 to 210°C (354.2 to 410°F)
	Urea	Decomposition temperature: >135°C (>275°F)
	Dithiotreitol	125 to 130°C (257 to 266°F)
<b>Flash point</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Closed cup: 135°C (275°F)
	Urea	Not available.
	Dithiotreitol	[Product does not sustain combustion.]
<b>Evaporation rate</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Not available.
	Urea	Not available.
	Dithiotreitol	Not available.
<b>Flammability (solid, gas)</b>	: OFFGEL Ampholyte 3-10	Not applicable.
	Glycerol 50 percent	Not applicable.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Not applicable.
	Urea	Not available.
	Dithiotreitol	Not available.
<b>Lower and upper explosive (flammable) limits</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Not available.
	Urea	Not available.
	Dithiotreitol	Not available.
<b>Vapor pressure</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	0.011 kPa (0.08 mm Hg) [room temperature]
	Urea	0 kPa (0 mm Hg) [room temperature]
	Dithiotreitol	Not available.
<b>Vapor density</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Not available.
	Urea	Not available.
	Dithiotreitol	Not available.
<b>Relative density</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	1.41
	Mineral Oil	0.875 to 0.905
	Urea	1.32
	Dithiotreitol	Not available.

## Section 9. Physical and chemical properties

<b>Solubility</b>	: OFFGEL Ampholyte 3-10	Easily soluble in the following materials: cold water and hot water.
	Glycerol 50 percent	Soluble in the following materials: cold water and hot water.
	Thiourea, Part Number 5188-6436	Easily soluble in the following materials: cold water and hot water.
	Mineral Oil	Soluble in the following materials: diethyl ether. Insoluble in the following materials: cold water and hot water.
	Urea	Easily soluble in the following materials: cold water and hot water.
	Dithiotreitol	Soluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.	
<b>Partition coefficient: n-octanol/water</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	>6
	Urea	<-1.73
	Dithiotreitol	Not available.
<b>Auto-ignition temperature</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	260 to 371.11°C (500 to 700°F)
	Urea	Not available.
	Dithiotreitol	Not available.
<b>Decomposition temperature</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Not available.
	Urea	>135°C (>275°F)
	Dithiotreitol	Not available.
<b>Viscosity</b>	: OFFGEL Ampholyte 3-10	Not available.
	Glycerol 50 percent	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Mineral Oil	Kinematic (40°C (104°F)): >0.013 cm <sup>2</sup> /s (>1.3 cSt)
	Urea	Dynamic (room temperature): 1.9 mPa·s (1.9 cP)
	Dithiotreitol	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: OFFGEL Ampholyte 3-10	No specific test data related to reactivity available for this product or its ingredients.
	Glycerol 50 percent	No specific test data related to reactivity available for this product or its ingredients.
	Thiourea, Part Number 5188-6436	No specific test data related to reactivity available for this product or its ingredients.
	Mineral Oil	No specific test data related to reactivity available for this product or its ingredients.
	Urea	No specific test data related to reactivity available for this product or its ingredients.
	Dithiotreitol	No specific test data related to reactivity available for this product or its ingredients.

## Section 10. Stability and reactivity

<b>10.2 Chemical stability</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: OFFGEL Ampholyte 3-10  Glycerol 50 percent  Thiourea, Part Number 5188-6436  Mineral Oil  Urea  Dithiotreitol	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea    Dithiotreitol	No specific data. No specific data. No specific data. No specific data. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation. No specific data.
<b>10.5 Incompatible materials</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea   Dithiotreitol	No specific data. No specific data. No specific data. No specific data. Reactive or incompatible with the following materials: oxidizing materials No specific data.
<b>10.6 Hazardous decomposition products</b>	: OFFGEL Ampholyte 3-10  Glycerol 50 percent  Thiourea, Part Number 5188-6436  Mineral Oil  Urea	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 10. Stability and reactivity

Dithiotreitol

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

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>Glycerol 50 percent</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Thiourea, Part Number 5188-6436</b> Thiourea	LD50 Oral	Rat	125 mg/kg	-
<b>Mineral Oil</b> White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-
<b>Urea</b> Urea	LD50 Oral	Rat	8471 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>Glycerol 50 percent</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
<b>Mineral Oil</b> White mineral oil (petroleum)	skin	Guinea pig	Not sensitizing

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
<b>Thiourea, Part Number 5188-6436</b> Thiourea	-	3	Reasonably anticipated to be a human carcinogen.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)



## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
<b>Dithiotreitol</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>Glycerol 50 percent</b> Glycerol	Category 2	Inhalation	kidneys

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

<b>Eye contact</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea	No known significant effects or critical hazards. Causes eye irritation. Causes eye irritation. No known significant effects or critical hazards. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. Causes serious eye irritation.
<b>Inhalation</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436  Mineral Oil Urea	No known significant effects or critical hazards. No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. No known significant effects or critical hazards. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil  Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation. No known significant effects or critical hazards. Causes skin irritation.
<b>Ingestion</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436  Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. May be irritating to mouth, throat and stomach. Toxic if swallowed. May be irritating to mouth, throat and stomach. No known significant effects or critical hazards. No known significant effects or critical hazards. Harmful if swallowed. Irritating to mouth, throat and stomach.

## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	Adverse symptoms may include the following: irritation watering redness
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: irritation watering redness
	Mineral Oil	No specific data.
<b>Inhalation</b>	Urea	Adverse symptoms may include the following: irritation redness
	Dithiotreitol	Adverse symptoms may include the following: pain or irritation watering redness
	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
<b>Skin contact</b>	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	No specific data.
	Urea	Adverse symptoms may include the following: respiratory tract irritation coughing
	Dithiotreitol	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Ingestion</b>	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	Adverse symptoms may include the following: irritation dryness cracking
<b>Short term exposure</b>	Urea	No specific data.
	Dithiotreitol	Adverse symptoms may include the following: irritation redness
	: OFFGEL Ampholyte 3-10	No specific data.
	Glycerol 50 percent	No specific data.
<b>Delayed and immediate effects and also chronic effects from short and long term exposure</b>	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Mineral Oil	No specific data.
	Urea	No specific data.
	Dithiotreitol	No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

## Section 11. Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

<b>General</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent  Thiourea, Part Number 5188-6436 Mineral Oil  Urea  Dithiotreitol	No known significant effects or critical hazards. May cause damage to organs through prolonged or repeated exposure.  No known significant effects or critical hazards. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.  No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436  Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. Suspected of damaging the unborn child. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: OFFGEL Ampholyte 3-10 Glycerol 50 percent Thiourea, Part Number 5188-6436 Mineral Oil Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Route	ATE value
Thiourea, Part Number 5188-6436 Oral	125 mg/kg

<b>Other information</b>	: OFFGEL Ampholyte 3-10 Glycerol 50% Thiourea Agilent Part Number 5188-6436  Mineral Oil Urea Dithiotreitol	Not available. Not available. Adverse symptoms include the following: Causes depression of bone marrow and occasionally focal degeneration in the brain. Not available. Not available. Not available.
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## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>Thiourea, Part Number 5188-6436</b> Thiourea	Acute EC50 4800 µg/l Fresh water Acute LC50 9000 to 18000 µg/l Fresh water	Algae - Scenedesmus abundans Daphnia - Daphnia magna	96 hours 48 hours
<b>Urea</b> Urea	Acute EC50 3910000 µg/l Fresh water Acute LC50 1000 mg/l Marine water Acute LC50 22.5 ppt Fresh water Chronic NOEC 2 g/L Fresh water	Daphnia - Daphnia magna - Neonate Crustaceans - Chaetogammarus marinus - Young Fish - Oreochromis mossambicus - Young Fish - Heteropneustes fossilis	48 hours 48 hours 96 hours 30 days
<b>Dithiotreitol</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 to 30000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>Thiourea, Part Number 5188-6436</b> Thiourea	301C Ready Biodegradability - Modified MITI Test (I)	0 % - 34 days	-	10 mg/l Activated sludge
	301C Ready Biodegradability - Modified MITI Test (I)	0 % - 34 days	-	30 mg/l Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>Urea</b> Urea	-	-	Readily

## Section 12. Ecological information

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>Glycerol 50 percent</b> Glycerol	-1.76	-	low
<b>Thiourea, Part Number 5188-6436</b> Thiourea	-1.08	2	low
<b>Mineral Oil</b> White mineral oil (petroleum)	>6	-	high
<b>Urea</b> Urea	<-1.73	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**12.5 Other adverse effects** :

OFFGEL Ampholyte 3-10	No known significant effects or critical hazards.
Glycerol 50 percent	No known significant effects or critical hazards.
Thiourea, Part Number 5188-6436	No known significant effects or critical hazards.
Mineral Oil	No known significant effects or critical hazards.
Urea	No known significant effects or critical hazards.
Dithiotreitol	No known significant effects or critical hazards.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**


The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.






## Section 14. Transport information

**Additional information** : **Special provisions**  
251, 340

**Remarks**  
Excepted Quantity

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT	UN3316	Chemical kits RQ (Thiourea)	9	III		<p><b>Reportable quantity</b> 60 lbs / 27.24 kg The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.</p> <p><b>Limited quantity</b> Yes.</p> <p><b>Packaging instruction</b> <b>Passenger aircraft</b> Quantity limitation: 10 kg <b>Cargo aircraft</b> Quantity limitation: 10 kg</p> <p><b>Special provisions</b> 15</p> <p><b>Remarks</b> Small Quantity</p>

## Section 14. Transport information

<b>TDG</b>	UN3316	CHEMICAL KIT	9	III		<p><b><u>Explosive Limit and Limited Quantity Index</u></b> 0</p> <p><b><u>Passenger Carrying Road or Rail Index</u></b> 10</p> <p><b><u>Special provisions</u></b> 65</p>
<b>Mexico</b>	UN3316	EQUIPO QUIMICO	9	III		<p><b><u>Special provisions</u></b> 251, 340</p>
<b>IMDG</b>	UN3316	CHEMICAL KIT. Marine pollutant (Thiourea)	9	III	 	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><b><u>Emergency schedules (EmS)</u></b> F-A, _S-P_</p> <p><b><u>Special provisions</u></b> 251, 340</p>
<b>IATA</b>	UN3316	Chemical kit	9	III		<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p><b><u>Passenger and Cargo Aircraft</u></b> Quantity limitation: 10 kg Packaging instructions: 960</p> <p><b><u>Cargo Aircraft Only</u></b> Quantity limitation: 10 kg Packaging instructions: 960</p> <p><b><u>Limited Quantities - Passenger Aircraft</u></b> Quantity limitation: 1 kg Packaging instructions: Y960</p> <p><b><u>Special provisions</u></b> A44, A163</p> <p><b><u>Remarks</u></b> Excepted Quantity</p>

PG\* : Packing group



## Section 15. Regulatory information

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

**U.S. Federal regulations** : TSCA 8(a) PAIR: Thiourea  
 United States inventory (TSCA 8b): Not determined.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

#### SARA 302/304

##### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

**Classification** : Immediate (acute) health hazard

##### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<b>Glycerol 50 percent</b> Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
<b>Thiourea, Part Number 5188-6436</b> Thiourea	60 - 100	No.	No.	No.	Yes.	Yes.
<b>Mineral Oil</b> White mineral oil (petroleum)	60 - 100	No.	No.	No.	Yes.	No.
<b>Urea</b> Urea	60 - 100	Yes.	No.	No.	No.	No.
<b>Dithiotreitol</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	60 - 100	No.	No.	No.	Yes.	No.

#### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	<b>Thiourea, Part Number 5188-6436</b> Thiourea	62-56-6	60 - 100
<b>Supplier notification</b>	<b>Thiourea, Part Number 5188-6436</b> Thiourea	62-56-6	60 - 100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

## Section 15. Regulatory information

### State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST; THIOUREA
- New York** : The following components are listed: Thiourea; Isothiourea
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; OIL MIST, MINERAL; MINERAL OIL (HIGHLY REFINED); THIOUREA; THIOCARBAMIDE
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL; THIOUREA

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Thiourea, Part Number 5188-6436 Thiourea	Yes.	No.	Yes.	No.

**Canada inventory** : Not determined.

### International regulations

- International lists** :
- Australia inventory (AICS):** Not determined.
  - China inventory (IECSC):** Not determined.
  - Japan inventory:** Not determined.
  - Korea inventory:** Not determined.
  - Malaysia Inventory (EHS Register):** Not determined.
  - New Zealand Inventory of Chemicals (NZIoC):** Not determined.
  - Philippines inventory (PICCS):** Not determined.
  - Taiwan inventory (CSNN):** Not determined.

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

## Section 16. Other information

### History

- Date of issue** : 5/28/2014.
- Date of previous issue** : 11/15/2012.
- Version** : 3

☑ Indicates information that has changed from previously issued version.

### Notice to reader

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