

Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

3100 OFFGEL Low Res Kit - pH 4-7, Part Number 5188-6427

1 . Identification of the material and supplier

Names

Product name : 3100 OFFGEL Low Res Kit - pH 4-7, Part Number 5188-6427

Part No. (Chemical Kit) : 5188-6427

Part No. : OFFGEL Ampholyte 4-7 5188-6438
Glycerol 50 percent 5188-6440
Mineral Oil 5188-6443
Thiourea, Part Number 5188-6436 5188-6436
Urea 5188-6435
Dithiotreitol 5188-6439

ADG : CHEMICAL KIT

Supplier

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number : CHEMTREC®: +(61)-290372994

Uses

Area of application : OFFGEL Ampholyte 4-7 Industrial applications, Professional applications.
Glycerol 50 percent Industrial applications, Professional applications.
Mineral Oil Industrial applications, Professional applications.
Thiourea, Part Number 5188-6436 Industrial applications, Professional applications.
Urea Industrial applications, Professional applications.
Dithiotreitol Industrial applications, Professional applications.

Material uses : Analytical chemistry.
OFFGEL Ampholyte 4-7 1 ml vials
Glycerol 50 percent 10 ml
Mineral Oil 50 ml
Thiourea, Part Number 5188-6436 9.1 g
Urea 25.2 g
Dithiotreitol 0.6 g

2 . Hazards identification

Classification : OFFGEL Ampholyte 4-7 Not regulated.
Glycerol 50 percent Not regulated.
Mineral Oil Not regulated.
Thiourea, Part Number 5188-6436 Carc. Cat. 3; R40
Repr. Cat. 3; R63
Xn; R22
N; R51/53
Urea N; R50
Dithiotreitol Xn; R22
Xi; R36/37/38

2 . Hazards identification

Risk phrases	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	Not classified. Not classified. Not classified. R40- Limited evidence of a carcinogenic effect. R63- Possible risk of harm to the unborn child. R22- Harmful if swallowed. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R50- Very toxic to aquatic organisms. R22- Harmful if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin.
Safety phrases	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36/37- Wear suitable protective clothing and gloves. S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S61- Avoid release to the environment. Refer to special instructions/safety data sheet. S36- Wear suitable protective clothing.
Statement of hazardous/ dangerous nature	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. HAZARDOUS SUBSTANCE. DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3 . Composition/information on ingredients

Mixture	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No. Yes. No. Yes. No. No.
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Ingredient name	CAS number	Concentration
Glycerol 50 percent Glycerol	56-81-5	30 - 60
Mineral Oil White mineral oil (petroleum)	8042-47-5	>60
Thiourea, Part Number 5188-6436 Thiourea	62-56-6	>60
Dithiotreitol (R*,R*)-1,4-Dimercaptobutane-2,3-diol	3483-12-3	>60

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

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.

4 . First-aid measures

Inhalation	: OFFGEL Ampholyte 4-7	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. Get medical attention if symptoms occur.
	Mineral Oil	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
	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 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.
Ingestion	: OFFGEL Ampholyte 4-7	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

4 . First-aid measures

Glycerol 50 percent	attention if symptoms occur. 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.
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.
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. 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.
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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

4 . First-aid measures

Skin contact	: OFFGEL Ampholyte 4-7	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.
	Mineral Oil	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Thiourea, Part Number 5188-6436	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Urea	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	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.
Eye contact	: OFFGEL Ampholyte 4-7	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. Get medical attention if irritation occurs.
	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.
	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 if irritation occurs.
	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.
Protection of first-aiders	: OFFGEL Ampholyte 4-7	No action shall be taken involving any personal risk or without suitable training.
	Glycerol 50 percent	No action shall be taken involving any personal risk or without suitable training.
	Mineral Oil	No action shall be taken involving any personal risk or without suitable training.
	Thiourea, Part Number 5188-6436	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give

4 . First-aid measures

	Urea	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.
	Dithiotreitol	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.
Advice to doctor	: OFFGEL Ampholyte 4-7	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Glycerol 50 percent	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Mineral Oil	No specific treatment. 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.
	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	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Extinguishing media

Suitable	: OFFGEL Ampholyte 4-7	Use an extinguishing agent suitable for the surrounding fire.
	Glycerol 50 percent	Use an extinguishing agent suitable for the surrounding fire.
	Mineral Oil	Use dry chemical, CO ₂ , alcohol-resistant foam or water spray (fog).
	Thiourea, Part Number 5188-6436	Use an extinguishing agent suitable for the surrounding fire.
	Urea	Use dry chemical powder.
	Dithiotreitol	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	: OFFGEL Ampholyte 4-7	None known.
	Glycerol 50 percent	None known.
	Mineral Oil	Do not use water jet.
	Thiourea, Part Number 5188-6436	None known.
	Urea	Do not use water jet.
	Dithiotreitol	None known.
Special exposure hazards	: OFFGEL Ampholyte 4-7	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.
	Mineral Oil	Promptly isolate the scene by removing all

5 . Fire-fighting measures

	Thiourea, Part Number 5188-6436	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. 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	This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. 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. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	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 4-7	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.
	Mineral Oil	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.
	Urea	Fine dust clouds may form explosive mixtures with air.
	Dithiotreitol	No specific fire or explosion hazard.
Hazardous thermal decomposition products	: OFFGEL Ampholyte 4-7	No specific data.
	Glycerol 50 percent	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Mineral Oil	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Thiourea, Part Number 5188-6436	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides
	Urea	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Dithiotreitol	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides

5 . Fire-fighting measures

Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hazchem code	: 2Z

6 . Accidental release measures

Personal precautions	: OFFGEL Ampholyte 4-7	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 spilt material. Put on appropriate personal protective equipment (see Section 8).
	Glycerol 50 percent	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 spilt material. Put on appropriate personal protective equipment (see Section 8).
	Mineral Oil	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 spilt material. Put on appropriate personal protective equipment (see Section 8).
	Thiourea, Part Number 5188-6436	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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
	Urea	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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
	Dithiotreitol	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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	: OFFGEL Ampholyte 4-7	Avoid dispersal of spilt 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 spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product

6 . Accidental release measures

Mineral Oil	<p>has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilt 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).</p>
Thiourea, Part Number 5188-6436	<p>Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.</p>
Urea	<p>Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.</p>
Dithiotreitol	<p>Avoid dispersal of spilt 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).</p>
Methods for cleaning up	<p>: OFFGEL Ampholyte 4-7</p> <p>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.</p>
Glycerol 50 percent	<p>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.</p>
Mineral Oil	<p>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.</p>
Thiourea, Part Number 5188-6436	<p>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.</p>
Urea	<p>Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.</p>
Dithiotreitol	<p>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.</p>

7 . Handling and storage

Handling

: OFFGEL Ampholyte 4-7

Glycerol 50 percent

Mineral Oil

Thiourea, Part Number
5188-6436

Urea

Put on appropriate personal protective equipment (see Section 8). 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.

Put on appropriate personal protective equipment (see Section 8). 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.

Put on appropriate personal protective equipment (see Section 8). 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. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. 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.

Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid release to the environment. Refer to special instructions/safety data sheet. Avoid the creation of dust when handling and 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

7 . Handling and storage

	Dithiotreitol	<p>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 earthing 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). 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. 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.</p>
<p>Storage</p>	: OFFGEL Ampholyte 4-7	<p>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 unlabelled containers. Use appropriate containment to avoid environmental contamination.</p>
	Glycerol 50 percent	<p>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 unlabelled containers. Use appropriate containment to avoid environmental contamination.</p>
	Mineral Oil	<p>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 unlabelled containers. Use appropriate containment to avoid environmental contamination.</p>
	Thiourea, Part Number 5188-6436	<p>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</p>

7 . Handling and storage

Urea

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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

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 unlabelled 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Glycerol 50 percent Glycerol	Safe Work Australia (Australia, 4/2013). TWA: 10 mg/m ³ 8 hours.
Mineral Oil White mineral oil (petroleum)	Safe Work Australia (Australia, 4/2013). TWA: 5 mg/m ³ 8 hours. Form: mist

No additional exposure standard allocated for other ingredients/components covered by the MSDS other than those listed in the table above.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Exposure controls

- Engineering measures** : If user operations generate dust, fumes, gas, vapour 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.
- 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.

8 . Exposure controls/personal protection

- Eyes** : 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 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.
- Hands** : 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.
- Respiratory** : 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.
- Skin** : 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.
- 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.

9 . Physical and chemical properties

Physical state	: OFFGEL Ampholyte 4-7	Liquid. [Viscous liquid.]
	Glycerol 50 percent	Liquid.
	Mineral Oil	Liquid. [Oily liquid.]
	Thiourea, Part Number 5188-6436	Solid. [Crystals.]
	Urea	Solid. [Crystals. / Powder. / Granular solid.]
Colour	: OFFGEL Ampholyte 4-7	Colourless to light yellow.
	Glycerol 50 percent	Not available.
	Mineral Oil	Colourless.
	Thiourea, Part Number 5188-6436	White.
	Urea	White.
Odour	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Odourless.
	Mineral Oil	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
Odour threshold	: OFFGEL Ampholyte 4-7	Odourless. / Ammoniacal.
	Glycerol 50 percent	Not available.
	Mineral Oil	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
Boiling point	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	179 to 210°C (354.2 to 410°F)
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Decomposition temperature: >135°C (>275°F)
	Dithiotreitol	125 to 130°C (257 to 266°F)

9 . Physical and chemical properties

Melting point	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	-60 to -9°C (-76 to 15.8°F)
	Thiourea, Part Number 5188-6436	Not available.
	Urea	134°C (273.2°F)
Vapour pressure	Dithiotreitol	42 to 43°C (107.6 to 109.4°F)
	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	0.011 kPa (0.08 mm Hg) [room temperature]
	Thiourea, Part Number 5188-6436	Not available.
Relative density	Urea	0 kPa (0 mm Hg) [room temperature]
	Dithiotreitol	Not available.
	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	0.875 to 0.905
Flash point	Thiourea, Part Number 5188-6436	1.41
	Urea	1.32
	Dithiotreitol	Not available.
	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
Flammable limits	Mineral Oil	Closed cup: 135°C (275°F)
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
	Dithiotreitol	[Product does not sustain combustion.]
	: OFFGEL Ampholyte 4-7	Not available.
Vapour density	Glycerol 50 percent	Not available.
	Mineral Oil	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
	Dithiotreitol	Not available.
pH	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Urea	7.2 [Conc. (% w/w): 10%]
Viscosity	Dithiotreitol	4.3 [Conc. (% w/w): 5%]
	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	Kinematic (40°C (104°F)): >0.013 cm ² /s (>1.3 cSt)
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Dynamic (room temperature): 1.9 mPa·s (1.9 cP)
	Dithiotreitol	Not available.

9 . Physical and chemical properties

Auto-ignition temperature	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	260 to 371.11°C (500 to 700°F)
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
Evaporation rate	: OFFGEL Ampholyte 4-7	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	Not available.
	Thiourea, Part Number 5188-6436	Not available.
	Urea	Not available.
Solubility	: OFFGEL Ampholyte 4-7	Easily soluble in the following materials: cold water and hot water.
	Glycerol 50 percent	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.
	Thiourea, Part Number 5188-6436	Easily soluble 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.

10 . Stability and reactivity

Chemical stability	: OFFGEL Ampholyte 4-7	The product is stable.
	Glycerol 50 percent	The product is stable.
	Mineral Oil	The product is stable.
	Thiourea, Part Number 5188-6436	The product is stable.
	Urea	The product is stable.
Possibility of hazardous reactions	: OFFGEL Ampholyte 4-7	The product is stable.
	Glycerol 50 percent	Under normal conditions of storage and use, hazardous reactions will not occur.
	Mineral Oil	Under normal conditions of storage and use, hazardous reactions will not occur.
	Thiourea, Part Number 5188-6436	Under normal conditions of storage and use, hazardous reactions will not occur.
	Urea	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: OFFGEL Ampholyte 4-7	Under normal conditions of storage and use, hazardous reactions will not occur.
	Glycerol 50 percent	No specific data.
	Mineral Oil	No specific data.
	Thiourea, Part Number 5188-6436	No specific data.
	Urea	No specific data.
	Dithiotreitol	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 earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
	Dithiotreitol	No specific data.

10 . Stability and reactivity

Materials to avoid	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea	No specific data. No specific data. No specific data. No specific data. Reactive or incompatible with the following materials: oxidizing materials No specific data.
Hazardous decomposition products	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	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. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Potential acute health effects

Inhalation	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No known significant effects or critical hazards. 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. 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. Irritating to respiratory system.
Ingestion	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Harmful if swallowed. No known significant effects or critical hazards. Harmful if swallowed. Irritating to mouth, throat and stomach.
Skin contact	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	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. No known significant effects or critical hazards. Irritating to skin.

11 . Toxicological information

Eye contact	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 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. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. Irritating to eyes.
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Acute toxicity

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

Conclusion/Summary : Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

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

Conclusion/Summary : Not available.

Sensitiser

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

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Thiourea, Part Number 5188-6436 Thiourea	Carc. Cat. 3; R40	-	Repr. Cat. 3; R63	-

11 . Toxicological information

Chronic effects	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. No known significant effects or critical hazards. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. No known significant effects or critical hazards.
Carcinogenicity	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 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. May cause cancer, based on animal data. Limited evidence of a carcinogenic effect. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 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.
Teratogenicity	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. May cause birth defects, based on animal data. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 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.
Fertility effects	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 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.
<u>Over-exposure signs/symptoms</u>		
Inhalation	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	No specific data. No specific data. No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations Adverse symptoms may include the following: respiratory tract irritation coughing Adverse symptoms may include the following: respiratory tract irritation coughing

11 . Toxicological information

Ingestion	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436	No specific data. No specific data. No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Urea Dithiotreitol	No specific data. No specific data.
Skin	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil	No specific data. No specific data. Adverse symptoms may include the following: irritation dryness cracking
	Thiourea, Part Number 5188-6436	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Urea Dithiotreitol	No specific data. Adverse symptoms may include the following: irritation redness
Eyes	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea	No specific data. No specific data. No specific data. No specific data.
	Dithiotreitol	Adverse symptoms may include the following: irritation redness Adverse symptoms may include the following: irritation watering redness
Other adverse symptoms	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	Not available. Not available. Not available. Not available. Not available. Not available.
Target organs	: OFFGEL Ampholyte 4-7 Glycerol 50 percent Mineral Oil Thiourea, Part Number 5188-6436 Urea Dithiotreitol	May cause damage to the following organs: eyes, eye, lens or cornea. Contains material which may cause damage to the following organs: kidneys, upper respiratory tract, skin, eye, lens or cornea. Does not cause damage to the following organs: blood, lungs, upper respiratory tract, skin, eyes. Contains material which may cause damage to the following organs: blood, liver, upper respiratory tract, skin, eyes, bone marrow, thyroid. May cause damage to the following organs: upper respiratory tract, skin, eyes. May cause damage to the following organs: upper respiratory tract, skin, eyes.

12 . Ecological information

Ecotoxicity : This material is toxic to aquatic life with long lasting effects.

Aquatic ecotoxicity

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

Other ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Thiourea, Part Number 5188-6436 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
Urea Urea	-	-	Readily

Bioaccumulative potential

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

Other adverse effects : No known significant effects or critical hazards.




13 . Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.


14 . Transport information

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

Remarks
Excepted Quantity

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADG	UN3316	CHEMICAL KIT	9	III		Hazchem code 2Z Special provisions 251, 340
IMDG	UN3316	CHEMICAL KIT. Marine pollutant (Thiourea)	9	III	 	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, _S-P_ Special provisions 251, 340

14 . Transport information

IATA	UN3316	Chemical kit	9	III		<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p><u>Passenger and Cargo Aircraft</u>Quantity limitation: 10 kg Packaging instructions: 960</p> <p><u>Cargo Aircraft Only</u> Quantity limitation: 10 kg Packaging instructions: 960</p> <p><u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: 1 kg Packaging instructions: Y960</p> <p><u>Special provisions</u> A44, A163</p> <p><u>Remarks</u> Excepted Quantity</p>
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PG* : Packing group

15 . Regulatory information**Standard Uniform Schedule of Medicine and Poisons**

5

Control of Scheduled Carcinogenic Substances

<u>Ingredient name</u>	<u>Schedule</u>
No listed substance	

Australia inventory (AICS) : Not determined.**16 . Other information**

Remarks :

Date of issue : 28/05/2014

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Indicates information that has changed from previously issued version.

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