

SAFETY DATA SHEET



AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600109

Section 1. Identification

1.1 Product identifier

Product name : AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600109
Part no. (chemical kit) : 600109
Part no. : AffinityScript Multiple Temperature Reverse Transcriptase 600107
 AffinityScript Multi-Temp RT 600107-51
 10X AffinityScript RT Buffer 600100-52
 100 mM DTT 600100-53
Validation date : 4/11/2022

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

Material uses : Analytical reagent.
AffinityScript Multi-Temp RT 200 µl (200 reactions)
 10X AffinityScript RT Buffer 1000 µl
 100 mM DTT 800 µl

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 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 : AffinityScript Multi-Temp RT This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 10X AffinityScript RT Buffer While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 100 mM DTT While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

AffinityScript Multi-Temp RT
 H320 EYE IRRITATION - Category 2B

2.2 GHS label elements

Signal word : AffinityScript Multi-Temp RT Warning
 10X AffinityScript RT Buffer No signal word.
 100 mM DTT No signal word.

Section 2. Hazards identification

Hazard statements	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	H320 - Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
Precautionary statements		
Prevention	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.
Response	: AffinityScript Multi-Temp RT	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 advice or attention.
Storage	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.
Disposal	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.
Supplemental label elements	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	None known. None known. None known.
2.3 Other hazards		
Hazards not otherwise classified	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Mixture Mixture Mixture
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Ingredient name	%	CAS number
AffinityScript Multi-Temp RT Glycerol	≥50 - ≤75	56-81-5
10X AffinityScript RT Buffer Potassium chloride	<10	7447-40-7

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 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

Section 4. First aid measures

Eye contact	: AffinityScript Multi-Temp RT	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. If irritation persists, get medical attention.
	10X AffinityScript RT Buffer	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.
	100 mM DTT	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.
Inhalation	: AffinityScript Multi-Temp RT	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.
	10X AffinityScript RT Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.
	100 mM DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: AffinityScript Multi-Temp RT	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.
	10X AffinityScript RT Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: AffinityScript Multi-Temp RT	Wash out mouth with water. Remove dentures if any. 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

Section 4. First aid measures

10X AffinityScript RT Buffer

tight clothing such as a collar, tie, belt or waistband. Wash out mouth with water. 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.

100 mM DTT

Wash out mouth with water. 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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Adverse symptoms may include the following: irritation watering redness No specific data. No specific data.
Inhalation	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
Skin contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
Ingestion	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.

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

Notes to physician	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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Section 4. First aid measures

Specific treatments	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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.
Unsuitable extinguishing media	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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. 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. Promptly isolate the scene by removing all persons
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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

: AffinityScript Multi-Temp RT

from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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

10X AffinityScript RT Buffer

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

100 mM DTT

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

: AffinityScript Multi-Temp RT

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.

10X AffinityScript RT Buffer

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. Put on appropriate personal protective equipment.

100 mM DTT

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. Put on appropriate personal protective equipment.

For emergency responders : AffinityScript Multi-Temp RT

If specialized 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". If specialized 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". If specialized 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".

10X AffinityScript RT Buffer

100 mM DTT

Section 6. Accidental release measures

6.2 Environmental precautions	: AffinityScript Multi-Temp RT	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).
	10X AffinityScript RT Buffer	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).
	100 mM DTT	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

Methods for cleaning up	: AffinityScript Multi-Temp RT	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.
	10X AffinityScript RT Buffer	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.
	100 mM DTT	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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: AffinityScript Multi-Temp RT	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.
	10X AffinityScript RT Buffer	Put on appropriate personal protective equipment (see Section 8).
	100 mM DTT	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: AffinityScript Multi-Temp RT	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.
	10X AffinityScript RT Buffer	Eating, drinking and smoking should be prohibited

Section 7. Handling and storage

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. 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.

100 mM DTT

7.2 Conditions for safe storage, including any incompatibilities

: AffinityScript Multi-Temp RT

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. See Section 10 for incompatible materials before handling or use.

10X AffinityScript RT Buffer

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. See Section 10 for incompatible materials before handling or use.

100 mM DTT

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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

: AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Industrial applications, Professional applications.
Industrial applications, Professional applications.
Industrial applications, Professional applications.

Industrial sector specific solutions

: AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not available.
Not available.
Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
AffinityScript Multi-Temp RT Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
10X AffinityScript RT Buffer Potassium chloride	None.

8.2 Exposure controls

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. 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: chemical splash goggles.

Skin 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

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Liquid. Liquid. Liquid.
Color	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Odor	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Odor threshold	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
pH	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	8 8.3 Not available.
Melting point/freezing point	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. 0°C (32°F)
Boiling point, initial boiling point, and boiling range	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. 100°C (212°F)

Flash point

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
AffinityScript Multi-Temp RT						
Edetic acid	>100	>212	DIN 51758			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
100 mM DTT						
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				

Evaporation rate	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Flammability	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.
Lower and upper explosion limit/flammability limit	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Vapor pressure	:	

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
AffinityScript Multi-Temp RT						
water	23.8	3.2		92.258	12.3	
Sorbitan monolaurate, ethoxylated	<1	<0.13				
10X AffinityScript RT Buffer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
100 mM DTT						
water	23.8	3.2		92.258	12.3	

Relative vapor density : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not available.
Not available.
Not available.

Relative density : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not available.
Not available.
Not available.

Solubility : AffinityScript Multi-Temp RT

10X AffinityScript RT Buffer

100 mM DTT

Soluble in the following materials: cold water and hot water.
Easily soluble in the following materials: cold water and hot water.
Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not applicable.
Not applicable.
Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
AffinityScript Multi-Temp RT			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263

Decomposition temperature : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not available.
Not available.
Not available.

Viscosity : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not available.
Not available.
Not available.

Particle characteristics

Median particle size : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not applicable.
Not applicable.
Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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.
10.4 Conditions to avoid	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
10.5 Incompatible materials	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
AffinityScript Multi-Temp RT Glycerol	LD50 Oral	Rat	12600 mg/kg	-
10X AffinityScript RT Buffer Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
AffinityScript Multi-Temp RT Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
10X AffinityScript RT Buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.
Not available.

Potential acute health effects

Eye contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Adverse symptoms may include the following: irritation watering redness No specific data. No specific data.
Inhalation	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
Skin contact	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
Ingestion	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.

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

Short term exposure

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

General	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
AffinityScript Multi-Temp RT Glycerol	12600	N/A	N/A	N/A	N/A
10X AffinityScript RT Buffer 10X AffinityScript RT Buffer Potassium chloride	46428.6 2600	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
AffinityScript Multi-Temp RT Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
10X AffinityScript RT Buffer Potassium chloride	Acute EC50 1337000 µg/l Fresh water Acute EC50 9.24 g/L Fresh water Acute EC50 83000 µg/l Fresh water Acute LC50 9.68 mg/l Fresh water Acute LC50 509.65 mg/l Fresh water	Algae - Navicula seminulum Algae - Desmodesmus subspicatus Daphnia - Daphnia magna Crustaceans - Pseudosida ramosa - Neonate Fish - Danio rerio	96 hours 72 hours 48 hours 48 hours 96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
AffinityScript Multi-Temp RT Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
10X AffinityScript RT Buffer Potassium chloride	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
AffinityScript Multi-Temp RT Glycerol	-1.76	-	low
10X AffinityScript RT Buffer Potassium chloride	-0.46	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Section 13. Disposal considerations

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

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

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) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid

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

Section 15. Regulatory information

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT
EYE IRRITATION - Category 2B
Not applicable.
Not applicable.

Composition/information on ingredients

Name	%	Classification
AffinityScript Multi-Temp RT Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B
10X AffinityScript RT Buffer Potassium chloride	<10	EYE IRRITATION - Category 2B

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST
New York : None of the components are listed.
New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL
Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL
California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list


Australia : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : Not determined.
Taiwan : All components are listed or exempted.
Thailand : Not determined.
Turkey : Not determined.
United States : All components are active or exempted.

Section 15. Regulatory information

Viet Nam :  All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
 AffinityScript Multi-Temp RT EYE IRRITATION - Category 2B	Calculation method

History

Date of issue : 04/11/2022

Date of previous issue : 08/19/2019

Version : 7

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 UN = United Nations

 Indicates information that has changed from previously issued version.

Notice to reader

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