Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600107

Section 1. Identification

1.1 Product identifier

Product name : AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600107

Part no. (chemical kit) : 600107

Part no. :

10X AffinityScript RT Buffer	600100-52
AffinityScript Multi-Temp RT	600107-51
100 mM DTT	600100-53

Validation date : 7/15/2018

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

Material uses : Analytical reagent.

10X AffinityScript RT Buffer	1 ml
AffinityScript Multi-Temp RT	0.05 ml (50 reactions)
100 mM DTT	0.2 ml

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 :

10X AffinityScript RT Buffer	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
AffinityScript Multi-Temp RT	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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

10X AffinityScript RT Buffer

H319 EYE IRRITATION - Category 2A

AffinityScript Multi-Temp RT

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity :

10X AffinityScript RT Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
AffinityScript Multi-Temp RT	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%

Section 2. Hazards identification

	10X AffinityScript RT Buffer	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 7.9%

2.2 GHS label elements

Hazard pictograms :

10X AffinityScript RT Buffer

Signal word :

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

Hazard statements :

10X AffinityScript RT Buffer	H319 - Causes serious eye irritation.
AffinityScript Multi-Temp RT	H320 - Causes eye irritation.
100 mM DTT	No known significant effects or critical hazards.

Precautionary statements

Prevention :

10X AffinityScript RT Buffer	P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
AffinityScript Multi-Temp RT	P264 - Wash hands thoroughly after handling.
100 mM DTT	Not applicable.

Response :

10X AffinityScript RT Buffer	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
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 attention.
100 mM DTT	Not applicable.

Storage :

10X AffinityScript RT Buffer	Not applicable.
AffinityScript Multi-Temp RT	Not applicable.
100 mM DTT	Not applicable.

Disposal :

10X AffinityScript RT Buffer	Not applicable.
AffinityScript Multi-Temp RT	Not applicable.
100 mM DTT	Not applicable.

Supplemental label elements :

10X AffinityScript RT Buffer	None known.
AffinityScript Multi-Temp RT	None known.
100 mM DTT	None known.

2.3 Other hazards

Hazards not otherwise classified :

10X AffinityScript RT Buffer	None known.
AffinityScript Multi-Temp RT	None known.
100 mM DTT	None known.

Section 3. Composition/information on ingredients

Substance/mixture : 10X AffinityScript RT Buffer — Mixture
AffinityScript Multi-Temp RT — Mixture
100 mM DTT — Mixture

Ingredient name	%	CAS number
10X AffinityScript RT Buffer		
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	<10	1185-53-1
Potassium chloride	≤10	7447-40-7
AffinityScript Multi-Temp RT		
Glycerol	≥50 - ≤75	56-81-5

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact : 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. Continue to rinse for at least 10 minutes. Get medical attention.

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.

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 : 10X AffinityScript RT Buffer: 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.

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

Section 4. First aid measures

			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.
		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	:	10X AffinityScript RT Buffer	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.
		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.
		100 mM DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	10X AffinityScript RT Buffer	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.
		AffinityScript Multi-Temp RT	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.
		100 mM DTT	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

Section 4. First aid measures

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

Over-exposure signs/symptoms

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

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

Notes to physician	:	10X AffinityScript RT Buffer	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.
		AffinityScript Multi-Temp RT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		100 mM DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	10X AffinityScript RT Buffer	No specific treatment.
		AffinityScript Multi-Temp RT	No specific treatment.
		100 mM DTT	No specific treatment.

Section 4. First aid measures

Protection of first-aiders	:	10X AffinityScript RT Buffer	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.
		AffinityScript Multi-Temp RT	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.
		100 mM DTT	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	:	10X AffinityScript RT Buffer	Use an extinguishing agent suitable for the surrounding fire.
		AffinityScript Multi-Temp RT	Use an extinguishing agent suitable for the surrounding fire.
		100 mM DTT	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	10X AffinityScript RT Buffer	None known.
		AffinityScript Multi-Temp RT	None known.
		100 mM DTT	None known.

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for firefighters

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

Section 5. Fire-fighting measures

			from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	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.
		AffinityScript Multi-Temp RT	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	:	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		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.
		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	:	10X AffinityScript RT Buffer	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".
		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".
		100 mM DTT	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".

Section 6. Accidental release measures

6.2 Environmental precautions	:	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).
		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).
		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	:	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.
		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.
		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	:	10X AffinityScript RT Buffer	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.
		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.
		100 mM DTT	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

Advice on general occupational hygiene	:	10X AffinityScript RT Buffer	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.
		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.
		100 mM DTT	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	:	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.
		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.
		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)

Section 7. Handling and storage

Recommendations	:	10X AffinityScript RT Buffer	Industrial applications, Professional applications.
		AffinityScript Multi-Temp RT	Industrial applications, Professional applications.
		100 mM DTT	Industrial applications, Professional applications.
Industrial sector specific solutions	:	10X AffinityScript RT Buffer	Not applicable.
		AffinityScript Multi-Temp RT	Not applicable.
		100 mM DTT	Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
10X AffinityScript RT Buffer	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None.
Potassium chloride	None.
AffinityScript Multi-Temp RT	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust

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.

Section 8. Exposure controls/personal protection

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	10X AffinityScript RT Buffer	Liquid.
		AffinityScript Multi-Temp RT	Liquid.
		100 mM DTT	Liquid.
Color	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Odor	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Odor threshold	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
pH	:	10X AffinityScript RT Buffer	8.3
		AffinityScript Multi-Temp RT	8
		100 mM DTT	Not available.
Melting point	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	0°C (32°F)
Boiling point	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	100°C (212°F)
Flash point	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Evaporation rate	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Flammability (solid, gas)	:	10X AffinityScript RT Buffer	Not applicable.
		AffinityScript Multi-Temp RT	Not applicable.
		100 mM DTT	Not applicable.
Lower and upper explosive (flammable) limits	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Vapor pressure	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Vapor density	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.

Section 9. Physical and chemical properties

Relative density	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Solubility	:	10X AffinityScript RT Buffer	Easily soluble in the following materials: cold water and hot water.
		AffinityScript Multi-Temp RT	Soluble in the following materials: cold water and hot water.
		100 mM DTT	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Auto-ignition temperature	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Decomposition temperature	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.
Viscosity	:	10X AffinityScript RT Buffer	Not available.
		AffinityScript Multi-Temp RT	Not available.
		100 mM DTT	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	:	10X AffinityScript RT Buffer	No specific test data related to reactivity available for this product or its ingredients.
		AffinityScript Multi-Temp RT	No specific test data related to reactivity available for this product or its ingredients.
		100 mM DTT	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	10X AffinityScript RT Buffer	The product is stable.
		AffinityScript Multi-Temp RT	The product is stable.
		100 mM DTT	The product is stable.
10.3 Possibility of hazardous reactions	:	10X AffinityScript RT Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
		AffinityScript Multi-Temp RT	Under normal conditions of storage and use, hazardous reactions will not occur.
		100 mM DTT	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	10X AffinityScript RT Buffer	No specific data.
		AffinityScript Multi-Temp RT	No specific data.
		100 mM DTT	No specific data.
10.5 Incompatible materials	:	10X AffinityScript RT Buffer	May react or be incompatible with oxidizing materials.
		AffinityScript Multi-Temp RT	May react or be incompatible with oxidizing materials.
		100 mM DTT	May react or be incompatible with oxidizing materials.

Section 10. Stability and reactivity

10.6 Hazardous decomposition products	:	10X AffinityScript RT Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		AffinityScript Multi-Temp RT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		100 mM DTT	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
10X AffinityScript RT Buffer				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
AffinityScript Multi-Temp RT				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

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

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)

Name	Category	Route of exposure	Target organs
10X AffinityScript RT Buffer			
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	:	10X AffinityScript RT Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
		AffinityScript Multi-Temp RT	Routes of entry anticipated: Oral, Dermal, Inhalation.
		100 mM DTT	Not available.

Potential acute health effects

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

Symptoms related to the physical, chemical and toxicological characteristics

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

Section 11. Toxicological information

Potential chronic health effects

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

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
10X AffinityScript RT Buffer Oral	46428.6 mg/kg

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
10X AffinityScript RT Buffer			
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 141460 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 12.92 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 880 mg/l Fresh water	Fish - Pimephales promelas	96 hours
AffinityScript Multi-Temp RT			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Section 12. Ecological information

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
10X AffinityScript RT Buffer Potassium chloride	-0.46	-	low
AffinityScript Multi-Temp RT Glycerol	-1.76	-	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

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 Annex II of MARPOL and the IBC Code : 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

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

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

Composition/information on ingredients

Name	%	Classification
10X AffinityScript RT Buffer		
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	<10	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Potassium chloride	≤10	EYE IRRITATION - Category 2A
AffinityScript Multi-Temp RT		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

Section 15. Regulatory information

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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 (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Malaysia : 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 listed or exempted.

Viet Nam : Not determined.

Section 16. Other information

History

Date of issue : 07/15/2018

Date of previous issue : 05/19/2017

Version : 6

Procedure used to derive the classification

Classification	Justification
10X AffinityScript RT Buffer EYE IRRITATION - Category 2A	Calculation method
AffinityScript Multi-Temp RT EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

Section 16. Other information

Notice to reader

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