

# SAFETY DATA SHEET



AffinityScript Multiple Temperature Reverse Transcriptase - 10 reactions, Part Number 5190-7277

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : AffinityScript Multiple Temperature Reverse Transcriptase - 10 reactions, Part Number 5190-7277

**Part No. (Kit)** : 5190-7277

**Part No.** : AffinityScript Multi-Temp 600105-51  
RT  
10X AffinityScript RT 600100-52  
Buffer  
100 mM DTT 600098-53

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

Identified uses	
Analytical reagent.	
AffinityScript Multi-Temp RT	0.01 mL (10 reactions)
10X AffinityScript RT Buffer	1.0 mL
100 mM DTT	0.04 mL

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

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : AffinityScript Multi-Temp Mixture  
RT  
10X AffinityScript RT Mixture  
Buffer  
100 mM DTT Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

**Ingredients of unknown toxicity** : AffinityScript Multi-Temp Not applicable.  
RT  
10X AffinityScript RT Percentage of the mixture consisting of ingredient(s) of  
Buffer unknown toxicity: 7.9%  
100 mM DTT Not applicable.

**Date of issue/Date of revision** : 29/07/2016

**SECTION 2: Hazards identification**

<b>Ingredients of unknown ecotoxicity</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.9%
	Buffer	
	100 mM DTT	Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

**2.2 Label elements**

<b>Signal word</b>	: AffinityScript Multi-Temp	No signal word.
	RT	
	10X AffinityScript RT	No signal word.
	Buffer	
	100 mM DTT	No signal word.
<b>Hazard statements</b>	: AffinityScript Multi-Temp	No known significant effects or critical hazards.
	RT	
	10X AffinityScript RT	No known significant effects or critical hazards.
	Buffer	
	100 mM DTT	No known significant effects or critical hazards.

**Precautionary statements**

<b>Prevention</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.
<b>Response</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.
<b>Storage</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.
<b>Disposal</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.
<b>Hazardous ingredients</b>	: No hazardous ingredient	
<b>Supplemental label elements</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Safety data sheet available on request.
	Buffer	
	100 mM DTT	Safety data sheet available on request.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.

**Special packaging requirements**

<b>Tactile warning of danger</b>	: AffinityScript Multi-Temp	Not applicable.
	RT	
	10X AffinityScript RT	Not applicable.
	Buffer	
	100 mM DTT	Not applicable.

## SECTION 2: Hazards identification

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	<b>Other hazards which do not result in classification</b>	: AffinityScript Multi-Temp RT	None known.
		10X AffinityScript RT Buffer	None known.
		100 mM DTT	None known.

## SECTION 3: Composition/information on ingredients

<b>3.2 Mixtures</b>	: AffinityScript Multi-Temp RT	Mixture
	10X AffinityScript RT Buffer	Mixture
	100 mM DTT	Mixture

Product/ingredient name	Identifiers	%	Classification	Type
<b>AffinityScript Multi-Temp RT</b> Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>10X AffinityScript RT Buffer</b> 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	<10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2, 3-diol	EC: 222-468-7 CAS: 3483-12-3	≤3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412 <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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.

#### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: 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. Get medical attention if irritation occurs.
	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.
<b>Inhalation</b>	: AffinityScript Multi-Temp RT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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

**SECTION 4: First aid measures**

		100 mM DTT	person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	:	AffinityScript Multi-Temp RT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		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.
<b>Ingestion</b>	:	AffinityScript Multi-Temp RT	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.
		10X AffinityScript RT Buffer	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.
		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 quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	:	AffinityScript Multi-Temp RT	No action shall be taken involving any personal risk or without suitable training.
		10X AffinityScript RT Buffer	No action shall be taken involving any personal risk or without suitable training.
		100 mM DTT	No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

<b>Eye contact</b>	:	AffinityScript Multi-Temp RT	No known significant effects or critical hazards.
		10X AffinityScript RT Buffer	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
<b>Inhalation</b>	:	AffinityScript Multi-Temp RT	No known significant effects or critical hazards.
		10X AffinityScript RT Buffer	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
<b>Skin contact</b>	:	AffinityScript Multi-Temp RT	No known significant effects or critical hazards.
		10X AffinityScript RT Buffer	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
<b>Ingestion</b>	:	AffinityScript Multi-Temp RT	No known significant effects or critical hazards.
		10X AffinityScript RT Buffer	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.

**SECTION 4: First aid measures****Over-exposure signs/symptoms**

<b>Eye contact</b>	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT Buffer	No specific data.
	100 mM DTT	No specific data.
<b>Inhalation</b>	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT Buffer	No specific data.
	100 mM DTT	No specific data.
<b>Skin contact</b>	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT Buffer	No specific data.
	100 mM DTT	No specific data.
<b>Ingestion</b>	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT Buffer	No specific data.
	100 mM DTT	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

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

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: AffinityScript Multi-Temp RT	Use an extinguishing agent suitable for the surrounding fire.
	10X AffinityScript RT Buffer	Use an extinguishing agent suitable for the surrounding fire.
	100 mM DTT	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: AffinityScript Multi-Temp RT	None known.
	10X AffinityScript RT Buffer	None known.
	100 mM DTT	None known.

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

<b>Hazards from the substance or mixture</b>	: AffinityScript Multi-Temp RT	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X AffinityScript RT Buffer	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.

**SECTION 5: Firefighting measures**

<b>Hazardous combustion products</b>	: AffinityScript Multi-Temp RT	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X AffinityScript RT Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	100 mM DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: 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.
	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.
	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.
<b>Special protective equipment for fire-fighters</b>	: 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

<b>For non-emergency personnel</b>	: 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 spilt material. 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 spilt 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 spilt material. Put on appropriate personal protective equipment.

**SECTION 6: Accidental release measures**

<b>For emergency responders</b>	: AffinityScript Multi-Temp RT	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X AffinityScript RT Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	100 mM DTT	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>6.2 Environmental precautions</b>	: AffinityScript Multi-Temp RT	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).
	10X AffinityScript RT Buffer	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).
	100 mM DTT	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).
<b>6.3 Methods and material for containment and cleaning up</b>		
<b>Methods for cleaning up</b>	: 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.
<b>6.4 Reference to other sections</b>	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.	

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

<b>Protective measures</b>	: AffinityScript Multi-Temp RT	Put on appropriate personal protective equipment (see Section 8).
	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).

**SECTION 7: Handling and storage**

<b>Advice on general occupational hygiene</b>	: 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 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.
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	: 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
<b>7.3 Specific end use(s)</b>		
<b>Recommendations</b>	: AffinityScript Multi-Temp RT	Industrial applications, Professional applications.
	10X AffinityScript RT Buffer	Industrial applications, Professional applications.
	100 mM DTT	Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: AffinityScript Multi-Temp RT	Not applicable.
	10X AffinityScript RT Buffer	Not applicable.
	100 mM DTT	Not applicable.



## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
AffinityScript Multi-Temp RT Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

**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 monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

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

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

#### Skin protection

**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.

**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.

**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.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	: AffinityScript Multi-Temp RT	Liquid.
	10X AffinityScript RT Buffer	Liquid.
	100 mM DTT	Liquid.
<b>Colour</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Odour</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Odour threshold</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>pH</b>	: AffinityScript Multi-Temp RT	8
	10X AffinityScript RT Buffer	8.3
	100 mM DTT	Not available.
<b>Melting point/freezing point</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	0°C
<b>Initial boiling point and boiling range</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	100°C
<b>Flash point</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Evaporation rate</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Flammability (solid, gas)</b>	: AffinityScript Multi-Temp RT	Not applicable.
	10X AffinityScript RT Buffer	Not applicable.
	100 mM DTT	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.

**SECTION 9: Physical and chemical properties**

<b>Vapour pressure</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Vapour density</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Relative density</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Solubility(ies)</b>	: AffinityScript Multi-Temp RT	Soluble in the following materials: cold water and hot water.
	10X AffinityScript RT Buffer	Easily soluble in the following materials: cold water and hot water.
	100 mM DTT	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Auto-ignition temperature</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Decomposition temperature</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Viscosity</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Explosive properties</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
<b>Oxidising properties</b>	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: 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.
<b>10.2 Chemical stability</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: 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.
<b>10.4 Conditions to avoid</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: 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**

Not available.

**Acute toxicity estimates**

Route	ATE value
100 mM DTT Oral	33333.3 mg/kg

**Irritation/Corrosion****Conclusion/Summary** : Not available.**Sensitiser****Conclusion/Summary** : Not available.**Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity**

Not available.

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

## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
<b>10X AffinityScript RT Buffer</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

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

Routes of entry anticipated: Oral, Dermal, Inhalation.  
Routes of entry anticipated: Oral, Dermal, Inhalation.  
Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

<b>Inhalation</b>	: 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.
<b>Ingestion</b>	: 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.
<b>Skin contact</b>	: 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.
<b>Eye contact</b>	: 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

<b>Inhalation</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
<b>Ingestion</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.
<b>Skin contact</b>	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	No specific data. No specific data. No specific data.

**SECTION 11: Toxicological information**

<b>Eye contact</b>	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT	No specific data.
	Buffer	
	100 mM DTT	No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

**Long term exposure**

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

**Potential chronic health effects**

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

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 to 30000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

**12.2 Persistence and degradability**

Not available.

## SECTION 12: Ecological information

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

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

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**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.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

### Regulatory information

**ADR/RID / IMDG / IATA** : Not regulated.

**14.6 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.

**14.7 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

#### EU Regulation (EC) No. 1907/2006 (REACH)

#### Annex XIV - List of substances subject to authorisation

#### Annex XIV

None of the components are listed.

#### Substances of very high concern

**Date of issue/Date of revision** : 29/07/2016

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**SECTION 15: Regulatory information**

None of the components are listed.

<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: AffinityScript Multi-Temp RT	Not applicable.
	10X AffinityScript RT Buffer	Not applicable.
	100 mM DTT	Not applicable.

**Other EU regulations**

**Europe inventory** : All components are listed or exempted.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**National regulations****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 Inform Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**International lists****National inventory**

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

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**SECTION 16: Other information**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** : **10X AffinityScript RT Buffer**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

**100 mM DTT**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** : **10X AffinityScript RT Buffer**

Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**100 mM DTT**

Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

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**Date of previous issue** : No previous validation.

**Version** : 1

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