

SAFETY DATA SHEET



AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600105

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

1.1 Product identifier

Product name	: AffinityScript Multiple Temperature Reverse Transcriptase, Part Number 600105
Part no. (chemical kit)	: 600105
Part no.	: AffinityScript Multi-Temp RT 600105-51
	: 10X AffinityScript RT Buffer 600100-52
	: 100 mM DTT 600098-53

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

Material uses	: Analytical reagent.
	<input checked="" type="checkbox"/> AffinityScript Multi-Temp RT 10 µl (10 reactions)
	10X AffinityScript RT Buffer 1000 µl
	100 mM DTT 40 µl

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	: <input checked="" type="checkbox"/> AffinityScript Multi-Temp RT Mixture
	: 10X AffinityScript RT Buffer Mixture
	: 100 mM DTT Mixture

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

Not classified.

Ingredients of unknown toxicity	: AffinityScript Multi-Temp RT	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
	: 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%
	: 100 mM DTT	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%

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SECTION 2: Hazards identification

Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.9%

Ingredients of unknown ecotoxicity : 10X AffinityScript RT Buffer

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

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

No signal word.
No signal word.
No signal word.

Hazard statements : 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.

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
10X AffinityScript RT Buffer
100 mM DTT

Not applicable.
Not applicable.
Not applicable.

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.

Hazardous ingredients : 10X AffinityScript RT Buffer
100 mM DTT

Not applicable.
Not applicable.

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

Not applicable.
Safety data sheet available on request.
Safety data sheet available on request.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : AffinityScript Multi-Temp RT
10X AffinityScript RT Buffer
100 mM DTT

Not applicable.
Not applicable.
Not applicable.

Special packaging requirements

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SECTION 2: Hazards identification

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

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

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

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
AffinityScript Multi-Temp RT Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
10X AffinityScript RT Buffer 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]
100 mM DTT (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 See Section 16 for the full text of the H statements declared above.	[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
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

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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. 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.
Inhalation	: 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 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.
	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 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.
Protection of first-aiders	: 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

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SECTION 4: First aid measures

Eye contact	: 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.
Inhalation	: 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.
Skin contact	: 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.
Ingestion	: 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.

Over-exposure signs/symptoms

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

Notes to physician	: 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.
Specific treatments	: 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

Suitable extinguishing media	: 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.
Unsuitable extinguishing media	: 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

Hazards from the substance or mixture	: 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.
Hazardous combustion products	: 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

Special precautions for fire-fighters	: 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.
Special protective equipment for fire-fighters	: 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

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SECTION 5: Firefighting measures

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

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 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.
For emergency responders	: 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".

6.2 Environmental precautions

: 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).

6.3 Methods and material 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.

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SECTION 6: Accidental release measures

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.

6.4 Reference to other sections : 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

Protective measures : 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).

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 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

Storage : 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. 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 unlabelled 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

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SECTION 7: Handling and storage

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. 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 applicable. Not applicable. 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	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 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.
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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.
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Individual protection measures

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SECTION 8: Exposure controls/personal protection

- 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

Physical state	: AffinityScript Multi-Temp RT	Liquid.
	10X AffinityScript RT Buffer	Liquid.
	100 mM DTT	Liquid.
Colour	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Odour	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Odour threshold	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
pH	: AffinityScript Multi-Temp RT	8
	10X AffinityScript RT Buffer	8.3
	100 mM DTT	Not available.

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SECTION 9: Physical and chemical properties

Melting point/freezing point	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. 0°C
Initial boiling point and boiling range	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. 100°C
Flash point	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Evaporation rate	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Flammability (solid, gas)	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.
Upper/lower flammability or explosive limits	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Vapour pressure	: AffinityScript Multi-Temp RT 10X AffinityScript RT Buffer 100 mM DTT	Not available. Not available. Not available.
Vapour 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(ies)	: 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 available. Not available. Not available.

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SECTION 9: Physical and chemical properties

Auto-ignition temperature	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Decomposition temperature	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Viscosity	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Explosive properties	: AffinityScript Multi-Temp RT	Not available.
	10X AffinityScript RT Buffer	Not available.
	100 mM DTT	Not available.
Oxidising properties	: 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

10.1 Reactivity	: AffinityScript Multi-Temp RT	No specific test data related to reactivity available for this product or its ingredients.
	10X AffinityScript RT Buffer	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	: AffinityScript Multi-Temp RT	The product is stable.
	10X AffinityScript RT Buffer	The product is stable.
	100 mM DTT	The product is stable.
10.3 Possibility of hazardous reactions	: AffinityScript Multi-Temp RT	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X AffinityScript RT Buffer	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	: AffinityScript Multi-Temp RT	No specific data.
	10X AffinityScript RT Buffer	No specific data.
	100 mM DTT	No specific data.

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SECTION 10: Stability and reactivity

10.5 Incompatible materials : AffinityScript Multi-Temp RT May react or be incompatible with oxidising materials.
 10X AffinityScript RT Buffer May react or be incompatible with oxidising materials.
 100 mM DTT May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products : AffinityScript Multi-Temp RT Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 10X AffinityScript RT Buffer 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

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.

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)

Product/ingredient 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
100 mM DTT (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.

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SECTION 11: Toxicological information

Information on likely routes of exposure : AffinityScript Multi-Temp RT Routes of entry anticipated: Oral, Dermal, Inhalation.
10X AffinityScript RT Buffer Routes of entry anticipated: Oral, Dermal, Inhalation.
100 mM DTT Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Inhalation : 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.

Ingestion : 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.

Skin contact : 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.

Eye contact : 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.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.
100 mM DTT No specific data.

Ingestion : AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.
100 mM DTT No specific data.

Skin contact : AffinityScript Multi-Temp RT No specific data.
10X AffinityScript RT Buffer No specific data.
100 mM DTT No specific data.

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

Delayed and immediate effects as well as 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.

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SECTION 11: Toxicological information

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.
Teratogenicity	: 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.
Developmental effects	: 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.
Fertility effects	: 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.

SECTION 12: Ecological information

12.1 Toxicity

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

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

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SECTION 12: Ecological information

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

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

None of the components are listed.

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

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

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SECTION 15: Regulatory information

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.

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.

Abbreviations and acronyms	: 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]

Classification	Justification
Not classified.	

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SECTION 16: Other information

Full text of abbreviated H statements

<p>10X AffinityScript RT Buffer H315 H319 H335</p> <p>100 mM DTT H302 H315 H319 H335 H412</p>	<p>Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.</p> <p>Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.</p>
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Full text of classifications [CLP/GHS]

<p>10X AffinityScript RT Buffer Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335</p> <p>100 mM DTT Acute Tox. 4, H302 Aquatic Chronic 3, H412 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335</p>	<p>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</p> <p>ACUTE TOXICITY (oral) - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</p>
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Date of previous issue : 19/05/2017

Version : 3

Notice to reader

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