

SAFETY DATA SHEET



RNAMaxx High Yield Transcription Kit, Part Number 200339

Section 1. Identification

Product identifier	: RNAMaxx High Yield Transcription Kit, Part Number 200339																				
Part No. (Chemical Kit)	: 200339																				
Part No.	: <table border="0" style="margin-left: 20px;"> <tr> <td>DEPC Treated Water</td> <td>200420-58</td> </tr> <tr> <td>T7 RNA Polymerase</td> <td>200339-51</td> </tr> <tr> <td>5X RNAMaxx Transcription Buffer</td> <td>200339-56</td> </tr> <tr> <td>100 mM rATP</td> <td>200339-52</td> </tr> <tr> <td>100 mM rGTP</td> <td>200339-53</td> </tr> <tr> <td>100 mM rUTP</td> <td>200339-54</td> </tr> <tr> <td>100 mM rCTP</td> <td>200339-55</td> </tr> <tr> <td>Yeast Pyrophosphatase</td> <td>200339-57</td> </tr> <tr> <td>RNase Block</td> <td>200339-58</td> </tr> <tr> <td>0.75 M DTT</td> <td>200340-85</td> </tr> </table>	DEPC Treated Water	200420-58	T7 RNA Polymerase	200339-51	5X RNAMaxx Transcription Buffer	200339-56	100 mM rATP	200339-52	100 mM rGTP	200339-53	100 mM rUTP	200339-54	100 mM rCTP	200339-55	Yeast Pyrophosphatase	200339-57	RNase Block	200339-58	0.75 M DTT	200340-85
DEPC Treated Water	200420-58																				
T7 RNA Polymerase	200339-51																				
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Yeast Pyrophosphatase	200339-57																				
RNase Block	200339-58																				
0.75 M DTT	200340-85																				

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

Analytical reagent.

DEPC Treated Water	1 ml
T7 RNA Polymerase	0.05 ml (50 µl 200 U/µl)
5X RNAMaxx Transcription Buffer	0.25 ml
100 mM rATP	0.05 ml
100 mM rGTP	0.05 ml
100 mM rUTP	0.05 ml
100 mM rCTP	0.05 ml
Yeast Pyrophosphatase	0.025 ml (25 µl 0.75 U/µl)
RNase Block	0.05 ml
0.75 M DTT	0.25 ml

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

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

0.75 M DTT	
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
100 mM rGTP	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.3%
100 mM rUTP	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 4.8%
100 mM rCTP	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 4.8%

Section 2. Hazard(s) identification

100 mM rATP	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%
100 mM rGTP	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.3%
100 mM rUTP	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.8%
100 mM rCTP	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.8%

GHS label elements

Hazard pictograms



Signal word

: EPC Treated Water	No signal word.
T7 RNA Polymerase	No signal word.
5X RNAMaxx Transcription Buffer	No signal word.
100 mM rATP	No signal word.
100 mM rGTP	No signal word.
100 mM rUTP	No signal word.
100 mM rCTP	No signal word.
Yeast Pyrophosphatase	No signal word.
RNase Block	No signal word.
0.75 M DTT	WARNING

Hazard statements

: EPC Treated Water	No known significant effects or critical hazards.
T7 RNA Polymerase	No known significant effects or critical hazards.
5X RNAMaxx Transcription Buffer	No known significant effects or critical hazards.
100 mM rATP	No known significant effects or critical hazards.
100 mM rGTP	No known significant effects or critical hazards.
100 mM rUTP	No known significant effects or critical hazards.
100 mM rCTP	No known significant effects or critical hazards.
Yeast Pyrophosphatase	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
0.75 M DTT	H319 - Causes serious eye irritation. H315 - Causes skin irritation.

Precautionary statements

Prevention

: EPC Treated Water	Not applicable.
T7 RNA Polymerase	Not applicable.
5X RNAMaxx Transcription Buffer	Not applicable.
100 mM rATP	Not applicable.
100 mM rGTP	Not applicable.
100 mM rUTP	Not applicable.
100 mM rCTP	Not applicable.
Yeast Pyrophosphatase	Not applicable.
RNase Block	Not applicable.
0.75 M DTT	P280 - Wear protective gloves. Wear eye or face protection. P264 - Wash hands thoroughly after handling.

Response

: EPC Treated Water	Not applicable.
T7 RNA Polymerase	Not applicable.
5X RNAMaxx Transcription Buffer	Not applicable.
100 mM rATP	Not applicable.
100 mM rGTP	Not applicable.
100 mM rUTP	Not applicable.
100 mM rCTP	Not applicable.
Yeast Pyrophosphatase	Not applicable.

Section 2. Hazard(s) identification

	RNase Block 0.75 M DTT	Not applicable. P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. 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.
Storage	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	None known. None known. None known. None known. None known. None known. None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	:	DEPC Treated Water	Substance
		T7 RNA Polymerase	Mixture
		5X RNAMaxx Transcription Buffer	Mixture
		100 mM rATP	Mixture
		100 mM rGTP	Mixture
		100 mM rUTP	Mixture
		100 mM rCTP	Mixture
		Yeast Pyrophosphatase	Mixture
		RNase Block	Mixture
		0.75 M DTT	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
DEPC Treated Water Water	100	7732-18-5
T7 RNA Polymerase Glycerol	≥30 - ≤60	56-81-5
Yeast Pyrophosphatase Glycerol	≥30 - ≤60	56-81-5
RNase Block Glycerol	≥30 - ≤60	56-81-5
0.75 M DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	≥10 - <20	3483-12-3

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



Description of necessary first aid measures

Eye contact	:	DEPC Treated Water	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.
		T7 RNA Polymerase	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.
		5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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.

Section 4. First aid measures

	100 mM rCTP	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.
	Yeast Pyrophosphatase	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.
	RNase Block	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.
	0.75 M DTT	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.
Inhalation	: DEPC Treated Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	T7 RNA Polymerase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
	Yeast Pyrophosphatase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	RNase Block	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	0.75 M DTT	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

Section 4. First aid measures

		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.
Skin contact	:  EPC Treated Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	T7 RNA Polymerase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	5X RNAMaxx Transcription Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM rATP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM rGTP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM rUTP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM rCTP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Yeast Pyrophosphatase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	RNase Block	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	0.75 M DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:  EPC Treated Water	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.
	T7 RNA Polymerase	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.
	5X RNAMaxx Transcription 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 rATP	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

Section 4. First aid measures

100 mM rGTP	water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
100 mM rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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.
RNase Block	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.
0.75 M DTT	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.

[Most important symptoms/effects, acute and delayed](#)

[Potential acute health effects](#)

Section 4. First aid measures

Eye contact	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes skin irritation.
Ingestion	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. Adverse symptoms may include the following: pain or irritation watering redness
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Inhalation	:	<input checked="" type="checkbox"/> EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	No specific data.
Skin contact	:	<input checked="" type="checkbox"/> EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	Adverse symptoms may include the following: irritation redness
Ingestion	:	<input checked="" type="checkbox"/> EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	No specific data.

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

Notes to physician	:	<input checked="" type="checkbox"/> EPC Treated Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		T7 RNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
			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.

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	Yeast Pyrophosphatase	surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RNase Block	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	0.75 M DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: <input checked="" type="checkbox"/> EPC Treated Water	No specific treatment.
	T7 RNA Polymerase	No specific treatment.
	5X RNAMaxx Transcription Buffer	No specific treatment.
	100 mM rATP	No specific treatment.
	100 mM rGTP	No specific treatment.
	100 mM rUTP	No specific treatment.
	100 mM rCTP	No specific treatment.
	Yeast Pyrophosphatase	No specific treatment.
	RNase Block	No specific treatment.
	0.75 M DTT	No specific treatment.
Protection of first-aiders	: <input checked="" type="checkbox"/> EPC Treated Water	No action shall be taken involving any personal risk or without suitable training.
	T7 RNA Polymerase	No action shall be taken involving any personal risk or without suitable training.
	5X RNAMaxx Transcription Buffer	No action shall be taken involving any personal risk or without suitable training.
	100 mM rATP	No action shall be taken involving any personal risk or without suitable training.
	100 mM rGTP	No action shall be taken involving any personal risk or without suitable training.
	100 mM rUTP	No action shall be taken involving any personal risk or without suitable training.
	100 mM rCTP	No action shall be taken involving any personal risk or without suitable training.
	Yeast Pyrophosphatase	No action shall be taken involving any personal risk or without suitable training.
	RNase Block	No action shall be taken involving any personal risk or without suitable training.
	0.75 M DTT	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: <input checked="" type="checkbox"/> EPC Treated Water	Use an extinguishing agent suitable for the surrounding fire.
	T7 RNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
	5X RNAMaxx Transcription Buffer	Use an extinguishing agent suitable for the surrounding fire.
	100 mM rATP	Use an extinguishing agent suitable for the surrounding fire.
	100 mM rGTP	Use an extinguishing agent suitable for the surrounding fire.
	100 mM rUTP	Use an extinguishing agent suitable for the surrounding fire.
	100 mM rCTP	Use an extinguishing agent suitable for the surrounding fire.


Section 5. Firefighting measures

	Yeast Pyrophosphatase	Use an extinguishing agent suitable for the surrounding fire.
	RNase Block	Use an extinguishing agent suitable for the surrounding fire.
	0.75 M DTT	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: DEPC Treated Water	None known.
	T7 RNA Polymerase	None known.
	5X RNAMaxx Transcription Buffer	None known.
	100 mM rATP	None known.
	100 mM rGTP	None known.
	100 mM rUTP	None known.
	100 mM rCTP	None known.
	Yeast Pyrophosphatase	None known.
	RNase Block	None known.
	0.75 M DTT	None known.
Specific hazards arising from the chemical	: DEPC Treated Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	T7 RNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	5X RNAMaxx Transcription Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	100 mM rATP	In a fire or if heated, a pressure increase will occur and the container may burst.
	100 mM rGTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	100 mM rUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	100 mM rCTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	Yeast Pyrophosphatase	In a fire or if heated, a pressure increase will occur and the container may burst.
	RNase Block	In a fire or if heated, a pressure increase will occur and the container may burst.
	0.75 M DTT	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: DEPC Treated Water	No specific data.
	T7 RNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	5X RNAMaxx Transcription Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	100 mM rATP	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
	100 mM rGTP	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

Section 5. Firefighting measures


100 mM rUTP	phosphorus oxides metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
100 mM rCTP	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
Yeast Pyrophosphatase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
RNase Block	Decomposition products may include the following materials: carbon dioxide carbon monoxide
0.75 M DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
Special protective actions for fire-fighters	
: DEPC Treated Water	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.
T7 RNA Polymerase	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.
5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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.
RNase Block	Promptly isolate the scene by removing all persons

Section 5. Firefighting 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.
	0.75 M 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	:  EPC Treated Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	T7 RNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	5X RNAMaxx Transcription Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	100 mM rATP	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 rGTP	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 rUTP	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 rCTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Yeast Pyrophosphatase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RNase Block	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	0.75 M 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  EPC Treated Water	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.
	T7 RNA Polymerase	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

5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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.
RNase Block	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.
0.75 M 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders :  EPC Treated Water	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".
T7 RNA Polymerase	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".
5X RNAMaxx Transcription 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 rATP	If specialised clothing is required to deal with the

Section 6. Accidental release measures

100 mM rGTP	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 rUTP	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 rCTP	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".
Yeast Pyrophosphatase	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".
RNase Block	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".
0.75 M 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".

Environmental precautions : EPC Treated Water

T7 RNA Polymerase	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).
5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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).

Section 6. Accidental release measures

Yeast Pyrophosphatase	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).
RNase Block	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).
0.75 M 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).

Methods and material for containment and cleaning up

Methods for cleaning up :  EPC Treated Water

	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.
T7 RNA Polymerase	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.
5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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.


Section 6. Accidental release measures

RNase Block	disposal container. Dispose of via a licensed waste disposal contractor. 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.
0.75 M 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

Precautions for safe handling

Protective measures

:  EPC Treated Water	Put on appropriate personal protective equipment (see Section 8).
T7 RNA Polymerase	Put on appropriate personal protective equipment (see Section 8).
5X RNAMaxx Transcription Buffer	Put on appropriate personal protective equipment (see Section 8).
100 mM rATP	Put on appropriate personal protective equipment (see Section 8).
100 mM rGTP	Put on appropriate personal protective equipment (see Section 8).
100 mM rUTP	Put on appropriate personal protective equipment (see Section 8).
100 mM rCTP	Put on appropriate personal protective equipment (see Section 8).
Yeast Pyrophosphatase	Put on appropriate personal protective equipment (see Section 8).
RNase Block	Put on appropriate personal protective equipment (see Section 8).
0.75 M DTT	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.

Advice on general occupational hygiene

:  EPC Treated Water	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.
T7 RNA Polymerase	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.
5X RNAMaxx Transcription 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

Section 7. Handling and storage

100 mM rATP	before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
100 mM rGTP	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 rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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.
RNase Block	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.
0.75 M 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.

Conditions for safe storage, including any incompatibilities : DEPC Treated Water

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.

T7 RNA Polymerase

Store in accordance with local regulations. Store in

Section 7. Handling and storage

	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.
5X RNAMaxx Transcription 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 rATP	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 rGTP	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 rUTP	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 rCTP	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.
Yeast Pyrophosphatase	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

Section 7. Handling and storage

RNase Block

drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Store in accordance with local regulations. Store in 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.

0.75 M 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.

Section 8. Exposure controls and personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
T7 RNA Polymerase Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
Yeast Pyrophosphatase Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
RNase Block Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

[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.

Section 8. Exposure controls and personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	:	☑EPC Treated Water	Liquid.	
		T7 RNA Polymerase	Liquid.	
		5X RNAMaxx Transcription Buffer	Liquid.	
		100 mM rATP	Liquid.	
		100 mM rGTP	Liquid.	
		100 mM rUTP	Liquid.	
		100 mM rCTP	Liquid.	
		Yeast Pyrophosphatase	Liquid.	
		RNase Block	Liquid.	
		0.75 M DTT	Liquid.	
	Colour	:	☑EPC Treated Water	Not available.
			T7 RNA Polymerase	Not available.
			5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.	
		100 mM rGTP	Not available.	
		100 mM rUTP	Not available.	
		100 mM rCTP	Not available.	
		Yeast Pyrophosphatase	Not available.	
		RNase Block	Not available.	
		0.75 M DTT	Not available.	
Odour		:	☑EPC Treated Water	Not available.
			T7 RNA Polymerase	Not available.
			5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.	
		100 mM rGTP	Not available.	
		100 mM rUTP	Not available.	
		100 mM rCTP	Not available.	
		Yeast Pyrophosphatase	Not available.	
		RNase Block	Not available.	
		0.75 M DTT	Not available.	

Section 9. Physical and chemical properties

Odour threshold	: <input checked="" type="checkbox"/> DEPC Treated Water	Not available.
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.
	pH	: <input checked="" type="checkbox"/> DEPC Treated Water
T7 RNA Polymerase		7.7
5X RNAMaxx Transcription Buffer		10
100 mM rATP		8
100 mM rGTP		8
100 mM rUTP		8
100 mM rCTP		8
Yeast Pyrophosphatase		7.5
RNase Block		7.6
0.75 M DTT		Not available.
Melting point		: <input checked="" type="checkbox"/> DEPC Treated Water
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	0°C (32°F)
	100 mM rGTP	0°C (32°F)
	100 mM rUTP	0°C (32°F)
	100 mM rCTP	0°C (32°F)
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.
	Boiling point	: <input checked="" type="checkbox"/> DEPC Treated Water
T7 RNA Polymerase		Not available.
5X RNAMaxx Transcription Buffer		Not available.
100 mM rATP		100°C (212°F)
100 mM rGTP		100°C (212°F)
100 mM rUTP		100°C (212°F)
100 mM rCTP		100°C (212°F)
Yeast Pyrophosphatase		Not available.
RNase Block		Not available.
0.75 M DTT		Not available.
Flash point		: <input checked="" type="checkbox"/> DEPC Treated Water
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.

Section 9. Physical and chemical properties

Evaporation rate	: <input checked="" type="checkbox"/> EPC Treated Water	Not available.
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.
	Flammability (solid, gas)	: <input checked="" type="checkbox"/> EPC Treated Water
T7 RNA Polymerase		Not applicable.
5X RNAMaxx Transcription Buffer		Not applicable.
100 mM rATP		Not applicable.
100 mM rGTP		Not applicable.
100 mM rUTP		Not applicable.
100 mM rCTP		Not applicable.
Yeast Pyrophosphatase		Not applicable.
RNase Block		Not applicable.
0.75 M DTT		Not applicable.
Lower and upper explosive (flammable) limits		: <input checked="" type="checkbox"/> EPC Treated Water
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.
	Vapour pressure	: <input checked="" type="checkbox"/> EPC Treated Water
T7 RNA Polymerase		Not available.
5X RNAMaxx Transcription Buffer		Not available.
100 mM rATP		Not available.
100 mM rGTP		Not available.
100 mM rUTP		Not available.
100 mM rCTP		Not available.
Yeast Pyrophosphatase		Not available.
RNase Block		Not available.
0.75 M DTT		Not available.
Vapour density		: <input checked="" type="checkbox"/> EPC Treated Water
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
	RNase Block	Not available.
	0.75 M DTT	Not available.

Section 9. Physical and chemical properties

Relative density	:	<input checked="" type="checkbox"/> EPC Treated Water	Not available.
		T7 RNA Polymerase	Not available.
		5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.
		100 mM rGTP	Not available.
		100 mM rUTP	Not available.
		100 mM rCTP	Not available.
		Yeast Pyrophosphatase	Not available.
		RNase Block	Not available.
		0.75 M DTT	Not available.
Solubility	:	<input checked="" type="checkbox"/> EPC Treated Water	Easily soluble in the following materials: cold water and hot water.
		T7 RNA Polymerase	Soluble in the following materials: cold water and hot water.
		5X RNAMaxx Transcription Buffer	Easily soluble in the following materials: cold water and hot water.
		100 mM rATP	Easily soluble in the following materials: cold water and hot water.
		100 mM rGTP	Easily soluble in the following materials: cold water and hot water.
		100 mM rUTP	Easily soluble in the following materials: cold water and hot water.
		100 mM rCTP	Easily soluble in the following materials: cold water and hot water.
		Yeast Pyrophosphatase	Soluble in the following materials: cold water and hot water.
		RNase Block	Soluble in the following materials: cold water and hot water.
		0.75 M DTT	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	<input checked="" type="checkbox"/> EPC Treated Water	Not available.
		T7 RNA Polymerase	Not available.
		5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.
		100 mM rGTP	Not available.
		100 mM rUTP	Not available.
		100 mM rCTP	Not available.
		Yeast Pyrophosphatase	Not available.
		RNase Block	Not available.
		0.75 M DTT	Not available.
Auto-ignition temperature	:	<input checked="" type="checkbox"/> EPC Treated Water	Not available.
		T7 RNA Polymerase	Not available.
		5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.
		100 mM rGTP	Not available.
		100 mM rUTP	Not available.
		100 mM rCTP	Not available.
		Yeast Pyrophosphatase	Not available.
		RNase Block	Not available.
		0.75 M DTT	Not available.
Decomposition temperature	:	<input checked="" type="checkbox"/> EPC Treated Water	Not available.
		T7 RNA Polymerase	Not available.
		5X RNAMaxx Transcription Buffer	Not available.
		100 mM rATP	Not available.
		100 mM rGTP	Not available.
		100 mM rUTP	Not available.

Section 9. Physical and chemical properties

Viscosity	RNase Block	Not available.
	0.75 M DTT	Not available.
	: <input checked="" type="checkbox"/> EPC Treated Water	Not available.
	T7 RNA Polymerase	Not available.
	5X RNAMaxx Transcription Buffer	Not available.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Not available.
RNase Block	Not available.	
0.75 M DTT	Not available.	

Section 10. Stability and reactivity

Reactivity	: <input checked="" type="checkbox"/> EPC Treated Water	No specific test data related to reactivity available for this product or its ingredients.
	T7 RNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
	5X RNAMaxx Transcription Buffer	No specific test data related to reactivity available for this product or its ingredients.
	100 mM rATP	No specific test data related to reactivity available for this product or its ingredients.
	100 mM rGTP	No specific test data related to reactivity available for this product or its ingredients.
	100 mM rUTP	No specific test data related to reactivity available for this product or its ingredients.
	100 mM rCTP	No specific test data related to reactivity available for this product or its ingredients.
	Yeast Pyrophosphatase	No specific test data related to reactivity available for this product or its ingredients.
	RNase Block	No specific test data related to reactivity available for this product or its ingredients.
	0.75 M DTT	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability	: <input checked="" type="checkbox"/> EPC Treated Water	The product is stable.
	T7 RNA Polymerase	The product is stable.
	5X RNAMaxx Transcription Buffer	The product is stable.
	100 mM rATP	The product is stable.
	100 mM rGTP	The product is stable.
	100 mM rUTP	The product is stable.
	100 mM rCTP	The product is stable.
	Yeast Pyrophosphatase	The product is stable.
	RNase Block	The product is stable.
	0.75 M DTT	The product is stable.

Possibility of hazardous reactions	: <input checked="" type="checkbox"/> EPC Treated Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	T7 RNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
	5X RNAMaxx Transcription Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	100 mM rATP	Under normal conditions of storage and use, hazardous reactions will not occur.
	100 mM rGTP	Under normal conditions of storage and use, hazardous reactions will not occur.
	100 mM rUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
100 mM rCTP	Under normal conditions of storage and use,	

Section 10. Stability and reactivity

	Yeast Pyrophosphatase	hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
	RNase Block	Under normal conditions of storage and use, hazardous reactions will not occur.
	0.75 M DTT	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: DEPC Treated Water	No specific data.
	T7 RNA Polymerase	No specific data.
	5X RNAMaxx Transcription Buffer	No specific data.
	100 mM rATP	No specific data.
	100 mM rGTP	No specific data.
	100 mM rUTP	No specific data.
	100 mM rCTP	No specific data.
	Yeast Pyrophosphatase	No specific data.
	RNase Block	No specific data.
	0.75 M DTT	No specific data.
Incompatible materials	: DEPC Treated Water	May react or be incompatible with oxidising materials.
	T7 RNA Polymerase	May react or be incompatible with oxidising materials.
	5X RNAMaxx Transcription Buffer	May react or be incompatible with oxidising materials.
	100 mM rATP	May react or be incompatible with oxidising materials.
	100 mM rGTP	May react or be incompatible with oxidising materials.
	100 mM rUTP	May react or be incompatible with oxidising materials.
	100 mM rCTP	May react or be incompatible with oxidising materials.
	Yeast Pyrophosphatase	May react or be incompatible with oxidising materials.
	RNase Block	May react or be incompatible with oxidising materials.
	0.75 M DTT	May react or be incompatible with oxidising materials.
Hazardous decomposition products	: DEPC Treated Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	T7 RNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	5X RNAMaxx Transcription Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM rATP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM rGTP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM rUTP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM rCTP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Yeast Pyrophosphatase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	RNase Block	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	0.75 M DTT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
T7 RNA Polymerase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Yeast Pyrophosphatase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
RNase Block Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
T7 RNA Polymerase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Yeast Pyrophosphatase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RNase Block Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
0.75 M 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.

Section 11. Toxicological information

Information on likely routes of exposure	<input checked="" type="checkbox"/> EPC Treated Water	Not available.
	T7 RNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
	5X RNAMaxx Transcription Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
	100 mM rATP	Not available.
	100 mM rGTP	Not available.
	100 mM rUTP	Not available.
	100 mM rCTP	Not available.
	Yeast Pyrophosphatase	Routes of entry anticipated: Oral, Dermal, Inhalation.
	RNase Block	Routes of entry anticipated: Oral, Dermal, Inhalation.
	0.75 M DTT	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

<input checked="" type="checkbox"/> EPC Treated Water	No known significant effects or critical hazards.
T7 RNA Polymerase	No known significant effects or critical hazards.
5X RNAMaxx Transcription Buffer	No known significant effects or critical hazards.
100 mM rATP	No known significant effects or critical hazards.
100 mM rGTP	No known significant effects or critical hazards.
100 mM rUTP	No known significant effects or critical hazards.
100 mM rCTP	No known significant effects or critical hazards.
Yeast Pyrophosphatase	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
0.75 M DTT	Causes serious eye irritation.

Inhalation

<input checked="" type="checkbox"/> EPC Treated Water	No known significant effects or critical hazards.
T7 RNA Polymerase	No known significant effects or critical hazards.
5X RNAMaxx Transcription Buffer	No known significant effects or critical hazards.
100 mM rATP	No known significant effects or critical hazards.
100 mM rGTP	No known significant effects or critical hazards.
100 mM rUTP	No known significant effects or critical hazards.
100 mM rCTP	No known significant effects or critical hazards.
Yeast Pyrophosphatase	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
0.75 M DTT	No known significant effects or critical hazards.

Skin contact

<input checked="" type="checkbox"/> EPC Treated Water	No known significant effects or critical hazards.
T7 RNA Polymerase	No known significant effects or critical hazards.
5X RNAMaxx Transcription Buffer	No known significant effects or critical hazards.
100 mM rATP	No known significant effects or critical hazards.
100 mM rGTP	No known significant effects or critical hazards.
100 mM rUTP	No known significant effects or critical hazards.
100 mM rCTP	No known significant effects or critical hazards.
Yeast Pyrophosphatase	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
0.75 M DTT	Causes skin irritation.

Ingestion

<input checked="" type="checkbox"/> EPC Treated Water	No known significant effects or critical hazards.
T7 RNA Polymerase	No known significant effects or critical hazards.
5X RNAMaxx Transcription Buffer	No known significant effects or critical hazards.
100 mM rATP	No known significant effects or critical hazards.
100 mM rGTP	No known significant effects or critical hazards.
100 mM rUTP	No known significant effects or critical hazards.
100 mM rCTP	No known significant effects or critical hazards.
Yeast Pyrophosphatase	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
0.75 M DTT	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	:	☒EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:	☒EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	No specific data.
Skin contact	:	☒EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M DTT	Adverse symptoms may include the following: irritation redness
Ingestion	:	☒EPC Treated Water	No specific data.
		T7 RNA Polymerase	No specific data.
		5X RNAMaxx Transcription Buffer	No specific data.
		100 mM rATP	No specific data.
		100 mM rGTP	No specific data.
		100 mM rUTP	No specific data.
		100 mM rCTP	No specific data.
		Yeast Pyrophosphatase	No specific data.
		RNase Block	No specific data.
		0.75 M 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.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

Not available.

General	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
<input checked="" type="checkbox"/> 0.75 M DTT Oral	4310.3 mg/kg

Other information	: <input checked="" type="checkbox"/> EPC Treated Water T7 RNA Polymerase 5X RNAMaxx Transcription Buffer 100 mM rATP 100 mM rGTP 100 mM rUTP 100 mM rCTP Yeast Pyrophosphatase RNase Block 0.75 M DTT	Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> T7 RNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Yeast Pyrophosphatase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
RNase Block Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
0.75 M DTT (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute LC50 27000 to 30000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> EPC Treated Water Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> EPC Treated Water Water	-	-	Readily

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> DEPC Treated Water Water	-1.38	-	low
T7 RNA Polymerase Glycerol	-1.76	-	low
Yeast Pyrophosphatase Glycerol	-1.76	-	low
RNase Block Glycerol	-1.76	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Section 15. Regulatory information

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.

International lists

National inventory

Canada	: Not determined.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: <input checked="" type="checkbox"/> Not determined.
Philippines	: <input checked="" type="checkbox"/> Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> Not determined.
Taiwan	: <input checked="" type="checkbox"/> All components are listed or exempted.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 12/10/2016
Date of previous issue	: 09/09/2014.
Version	: 4

Key to abbreviations	: ADG = Australian Dangerous Goods ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) NOHSC = National Occupational Health and Safety Commission SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations
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Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> 0.75 M DTT Skin Irrit. 2, H315 Eye Irrit. 2A, H319	Calculation method Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Any other relevant information

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