Conforms to Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals

SAFETY DATA SHEET

Agilent Technologies

Agilent RNA 6000 Nano Reagents, Part Number 5067-1512

Section 1. Identification

Product identifier : Agilent RNA 6000 Nano Reagents, Part Number 5067-1512

Part no. (chemical kit) : 5067-1512

Part no. :

Reagents RNA Nano	G2938-80023
RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano ladder	G2938-80038
RNA 6000 Nano Ladder	Not available.

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

Identified uses : Analytical chemistry.
Research and Development

RNA 6000 Nano Gel Matrix	2 x 1.2 ml
RNA Nano Dye Concentrate	1 x 0.035 ml
RNA 6000 Nano Marker	2 x 1.2 ml
RNA 6000 Nano Ladder	1 x 0.035 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

RNA Nano Dye Concentrate

H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

GHS label elements

Signal word :

RNA 6000 Nano Gel Matrix	No signal word.
RNA Nano Dye Concentrate	WARNING
RNA 6000 Nano Marker	No signal word.
RNA 6000 Nano Ladder	No signal word.

Hazard statements :

RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
RNA Nano Dye Concentrate	H320 - Causes eye irritation.
RNA 6000 Nano Marker	No known significant effects or critical hazards.
RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Precautionary statements

Prevention :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Section 2. Hazard(s) identification

Response :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Storage :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Disposal :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Supplemental label elements

Additional warning phrases :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Other hazards which do not result in classification :

RNA 6000 Nano Gel Matrix	None known.
RNA Nano Dye Concentrate	None known.
RNA 6000 Nano Marker	None known.
RNA 6000 Nano Ladder	None known.

Section 3. Composition and ingredient information

Substance/mixture :

RNA 6000 Nano Gel Matrix	Mixture
RNA Nano Dye Concentrate	Mixture
RNA 6000 Nano Marker	Mixture
RNA 6000 Nano Ladder	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
RNA Nano Dye Concentrate		
Dimethyl sulfoxide	≥90	67-68-5

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact :

RNA 6000 Nano Gel Matrix	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.
RNA Nano Dye Concentrate	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
RNA 6000 Nano Marker	Immediately flush eyes with plenty of water,

Section 4. First aid measures

			occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		RNA 6000 Nano Ladder	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	:	RNA 6000 Nano Gel Matrix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		RNA Nano Dye Concentrate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		RNA 6000 Nano Marker	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		RNA 6000 Nano Ladder	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	RNA 6000 Nano Gel Matrix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		RNA Nano Dye Concentrate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		RNA 6000 Nano Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		RNA 6000 Nano Ladder	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	RNA 6000 Nano Gel Matrix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		RNA Nano Dye Concentrate	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		RNA 6000 Nano Marker	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical

Section 4. First aid measures

RNA 6000 Nano Ladder	personnel. Get medical attention if symptoms occur. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact :	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
	RNA Nano Dye Concentrate	Causes eye irritation.
	RNA 6000 Nano Marker	No known significant effects or critical hazards.
	RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Inhalation :	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
	RNA Nano Dye Concentrate	No known significant effects or critical hazards.
	RNA 6000 Nano Marker	No known significant effects or critical hazards.
	RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Skin contact :	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
	RNA Nano Dye Concentrate	No known significant effects or critical hazards.
	RNA 6000 Nano Marker	No known significant effects or critical hazards.
	RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Ingestion :	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
	RNA Nano Dye Concentrate	No known significant effects or critical hazards.
	RNA 6000 Nano Marker	No known significant effects or critical hazards.
	RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	RNA 6000 Nano Gel Matrix	No specific data.
	RNA Nano Dye Concentrate	Adverse symptoms may include the following: irritation watering redness
	RNA 6000 Nano Marker	No specific data.
	RNA 6000 Nano Ladder	No specific data.
Inhalation :	RNA 6000 Nano Gel Matrix	No specific data.
	RNA Nano Dye Concentrate	No specific data.
	RNA 6000 Nano Marker	No specific data.
	RNA 6000 Nano Ladder	No specific data.
Skin contact :	RNA 6000 Nano Gel Matrix	No specific data.
	RNA Nano Dye Concentrate	No specific data.
	RNA 6000 Nano Marker	No specific data.
	RNA 6000 Nano Ladder	No specific data.
Ingestion :	RNA 6000 Nano Gel Matrix	No specific data.
	RNA Nano Dye Concentrate	No specific data.
	RNA 6000 Nano Marker	No specific data.
	RNA 6000 Nano Ladder	No specific data.

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

Notes to physician :	RNA 6000 Nano Gel Matrix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RNA Nano Dye Concentrate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RNA 6000 Nano Marker	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RNA 6000 Nano Ladder	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments :	RNA 6000 Nano Gel Matrix	No specific treatment.
	RNA Nano Dye Concentrate	No specific treatment.
	RNA 6000 Nano Marker	No specific treatment.
	RNA 6000 Nano Ladder	No specific treatment.
Protection of first-aiders :	RNA 6000 Nano Gel Matrix	No action shall be taken involving any personal risk or without suitable training.
	RNA Nano Dye Concentrate	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.
	RNA 6000 Nano Marker	No action shall be taken involving any personal risk or without suitable training.
	RNA 6000 Nano Ladder	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media :	RNA 6000 Nano Gel Matrix	Use an extinguishing agent suitable for the surrounding fire.
	RNA Nano Dye Concentrate	Use an extinguishing agent suitable for the surrounding fire.
	RNA 6000 Nano Marker	Use an extinguishing agent suitable for the surrounding fire.
	RNA 6000 Nano Ladder	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media :	RNA 6000 Nano Gel Matrix	None known.
	RNA Nano Dye Concentrate	None known.
	RNA 6000 Nano Marker	None known.
	RNA 6000 Nano Ladder	None known.
Specific hazards arising from the chemical :	RNA 6000 Nano Gel Matrix	In a fire or if heated, a pressure increase will occur and the container may burst.
	RNA Nano Dye Concentrate	In a fire or if heated, a pressure increase will occur and the container may burst.
	RNA 6000 Nano Marker	In a fire or if heated, a pressure increase will occur and the container may burst.
	RNA 6000 Nano Ladder	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products :	RNA 6000 Nano Gel Matrix	No specific data.
	RNA Nano Dye Concentrate	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	RNA 6000 Nano Marker	No specific data.
	RNA 6000 Nano Ladder	No specific data.
Special protective actions for fire-fighters :	RNA 6000 Nano Gel Matrix	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.
	RNA Nano Dye Concentrate	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.
	RNA 6000 Nano Marker	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

Section 5. Firefighting measures

		without suitable training.
	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RNA Nano Dye Concentrate	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RNA 6000 Nano Marker	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	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.
	RNA Nano Dye Concentrate	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.
	RNA 6000 Nano Marker	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.
	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	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".
	RNA Nano Dye Concentrate	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".
	RNA 6000 Nano Marker	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".

Section 6. Accidental release measures

	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	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).
	RNA Nano Dye Concentrate	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).
	RNA 6000 Nano Marker	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).
	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	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.
	RNA Nano Dye Concentrate	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.
	RNA 6000 Nano Marker	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.
	RNA 6000 Nano Ladder	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 :	RNA 6000 Nano Gel Matrix	Put on appropriate personal protective equipment (see Section 8).
	RNA Nano Dye Concentrate	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

Section 7. Handling and storage

			tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
		RNA 6000 Nano Marker	Put on appropriate personal protective equipment (see Section 8).
		RNA 6000 Nano Ladder	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	RNA 6000 Nano Gel Matrix	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.
		RNA Nano Dye Concentrate	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.
		RNA 6000 Nano Marker	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.
		RNA 6000 Nano Ladder	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	:	RNA 6000 Nano Gel Matrix	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.
		RNA Nano Dye Concentrate	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.
		RNA 6000 Nano Marker	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

Section 7. Handling and storage

RNA 6000 Nano Ladder	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. 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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
RNA Nano Dye Concentrate Dimethyl sulfoxide	**DFG MAC-values list (Germany, 7/2022). Absorbed through skin.** PEAK: 320 mg/m³, 4 times per shift, 15 minutes. TWA: 160 mg/m³ 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 50 ppm 8 hours.

Biological exposure indices

No exposure indices known.

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

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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

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

Skin protection

Section 8. Exposure controls and personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state :

RNA 6000 Nano Gel Matrix	Liquid.
RNA Nano Dye Concentrate	Liquid.
RNA 6000 Nano Marker	Liquid.
RNA 6000 Nano Ladder	Liquid.

Colour :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Blue.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Odour :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Odour threshold :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

pH :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Melting point/freezing point :

RNA 6000 Nano Gel Matrix	0°C (32°F)
RNA Nano Dye Concentrate	18.4°C (65.1°F)
RNA 6000 Nano Marker	0°C (32°F)
RNA 6000 Nano Ladder	0°C (32°F)

Boiling point, initial boiling point, and boiling range :

RNA 6000 Nano Gel Matrix	100°C (212°F)
RNA Nano Dye Concentrate	189°C (372.2°F)
RNA 6000 Nano Marker	100°C (212°F)
RNA 6000 Nano Ladder	100°C (212°F)

Flash point :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Closed cup: 94°C (201.2°F)
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Section 9. Physical and chemical properties and safety characteristics

Evaporation rate :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Flammability :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Lower and upper explosion limit/flammability limit :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Vapour pressure :

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
RNA 6000 Nano Gel Matrix						
water	17.5	2.3	-	92.258	12.3	-
RNA Nano Dye Concentrate						
Dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-
RNA 6000 Nano Marker						
water	17.5	2.3	-	92.258	12.3	-
RNA 6000 Nano Ladder						
water	17.5	2.3	-	92.258	12.3	-

Relative vapour density :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Relative density :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Solubility(ies) :

Media	Result
RNA 6000 Nano Gel Matrix	
water	Soluble
RNA Nano Dye Concentrate	
water	Soluble
RNA 6000 Nano Marker	
water	Soluble
RNA 6000 Nano Ladder	
water	Soluble

Partition coefficient: n-octanol/water :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

Auto-ignition temperature :

Ingredient name	°C	°F	Method
RNA Nano Dye Concentrate			
Dimethyl sulfoxide	300 to 302	572 to 575.6	-

Decomposition temperature :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Viscosity :

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Not available.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Particle characteristics

Median particle size :

RNA 6000 Nano Gel Matrix	Not applicable.
RNA Nano Dye Concentrate	Not applicable.
RNA 6000 Nano Marker	Not applicable.
RNA 6000 Nano Ladder	Not applicable.

Section 10. Stability and reactivity

Reactivity :

RNA 6000 Nano Gel Matrix	No specific test data related to reactivity available for this product or its ingredients.
RNA Nano Dye Concentrate	No specific test data related to reactivity available for this product or its ingredients.
RNA 6000 Nano Marker	No specific test data related to reactivity available for this product or its ingredients.
RNA 6000 Nano Ladder	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability :

RNA 6000 Nano Gel Matrix	The product is stable.
RNA Nano Dye Concentrate	The product is stable.
RNA 6000 Nano Marker	The product is stable.
RNA 6000 Nano Ladder	The product is stable.

Possibility of hazardous reactions :

RNA 6000 Nano Gel Matrix	Under normal conditions of storage and use, hazardous reactions will not occur.
RNA Nano Dye Concentrate	Under normal conditions of storage and use, hazardous reactions will not occur.
RNA 6000 Nano Marker	Under normal conditions of storage and use, hazardous reactions will not occur.
RNA 6000 Nano Ladder	Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid :

RNA 6000 Nano Gel Matrix	No specific data.
RNA Nano Dye Concentrate	No specific data.
RNA 6000 Nano Marker	No specific data.
RNA 6000 Nano Ladder	No specific data.

Incompatible materials :

RNA 6000 Nano Gel Matrix	May react or be incompatible with oxidising materials.
RNA Nano Dye Concentrate	May react or be incompatible with oxidising materials.
RNA 6000 Nano Marker	May react or be incompatible with oxidising materials.
RNA 6000 Nano Ladder	May react or be incompatible with oxidising materials.

Section 10. Stability and reactivity

Hazardous decomposition products :

RNA 6000 Nano Gel Matrix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
RNA Nano Dye Concentrate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
RNA 6000 Nano Marker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
RNA 6000 Nano Ladder	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
RNA Nano Dye Concentrate				
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
RNA Nano Dye Concentrate					
Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitisation

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on likely routes of exposure

RNA 6000 Nano Gel Matrix	Not available.
RNA Nano Dye Concentrate	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
RNA 6000 Nano Marker	Not available.
RNA 6000 Nano Ladder	Not available.

Potential acute health effects

Eye contact

RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
RNA Nano Dye Concentrate	Causes eye irritation.
RNA 6000 Nano Marker	No known significant effects or critical hazards.
RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Inhalation

RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
RNA Nano Dye Concentrate	No known significant effects or critical hazards.
RNA 6000 Nano Marker	No known significant effects or critical hazards.
RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Skin contact

RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
RNA Nano Dye Concentrate	No known significant effects or critical hazards.
RNA 6000 Nano Marker	No known significant effects or critical hazards.
RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Ingestion

RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
RNA Nano Dye Concentrate	No known significant effects or critical hazards.
RNA 6000 Nano Marker	No known significant effects or critical hazards.
RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

RNA 6000 Nano Gel Matrix	No specific data.
RNA Nano Dye Concentrate	Adverse symptoms may include the following: irritation watering redness
RNA 6000 Nano Marker	No specific data.
RNA 6000 Nano Ladder	No specific data.

Inhalation

RNA 6000 Nano Gel Matrix	No specific data.
RNA Nano Dye Concentrate	No specific data.
RNA 6000 Nano Marker	No specific data.
RNA 6000 Nano Ladder	No specific data.

Skin contact

RNA 6000 Nano Gel Matrix	No specific data.
RNA Nano Dye Concentrate	No specific data.
RNA 6000 Nano Marker	No specific data.
RNA 6000 Nano Ladder	No specific data.

Ingestion

RNA 6000 Nano Gel Matrix	No specific data.
RNA Nano Dye Concentrate	No specific data.
RNA 6000 Nano Marker	No specific data.
RNA 6000 Nano Ladder	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

General	:	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
		RNA Nano Dye Concentrate	No known significant effects or critical hazards.
		RNA 6000 Nano Marker	No known significant effects or critical hazards.
		RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Carcinogenicity	:	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
		RNA Nano Dye Concentrate	No known significant effects or critical hazards.
		RNA 6000 Nano Marker	No known significant effects or critical hazards.
		RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Mutagenicity	:	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
		RNA Nano Dye Concentrate	No known significant effects or critical hazards.
		RNA 6000 Nano Marker	No known significant effects or critical hazards.
		RNA 6000 Nano Ladder	No known significant effects or critical hazards.
Reproductive toxicity	:	RNA 6000 Nano Gel Matrix	No known significant effects or critical hazards.
		RNA Nano Dye Concentrate	No known significant effects or critical hazards.
		RNA 6000 Nano Marker	No known significant effects or critical hazards.
		RNA 6000 Nano Ladder	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
RNA Nano Dye Concentrate Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
RNA Nano Dye Concentrate Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - *Daphnia magna* - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours
	Chronic NOEC 100 ul/L Marine water	Algae - *Ulva lactuca*	72 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling)	21 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
RNA Nano Dye Concentrate Dimethyl sulfoxide	OECD 301D Ready Biodegradability - Closed Bottle Test	31 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNA Nano Dye Concentrate Dimethyl sulfoxide	-	-	Not readily

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
RNA Nano Dye Concentrate			
Dimethyl sulfoxide	-1.35	3.16	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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport 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 IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

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Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

New Zealand : All components are listed or exempted.

United States : Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 27/09/2023

Date of previous issue : 07/08/2020

Version : 8

Key to abbreviations : ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

Classification	Justification
RNA Nano Dye Concentrate SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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