GE Healthcare

Material Safety Data Sheet

Canada
English

Section 1. Chemical product and company identification

Product name **Oligosynt™ 2'-OMe RNA G 30, 10 x 30 µmole**

Catalogue Number 28-9829-86

Material uses	Industrial applications: Analytical chemistry. Research.
Product type	Liquid.
Validation date	21 November 2014
Print date	11 February 2015
Supplier	GE Healthcare UK Ltd Amersham Place Little Chalfont Buckinghamshire HP7 9NA England +44 0870 606 1921

In case of emergency			
	US	ChemTrec (US)	1-800-424-9300
	Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state	Liquid. [(White suspension in closed column.)]
Color	solution : Colorless. / Suspension. : White.
Odor	Ethereal. / Sweetish.
Signal word	WARNING!
Hazard statements	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Precautionary measures	Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container tightly closed. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes	Moderately irritating to eyes.
Skin	Toxic in contact with skin. Moderately irritating to the skin.
Inhalation	Toxic by inhalation. Moderately irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	Toxic if swallowed.

Potential chronic health effects

Chronic effects	Contains material that can cause target organ damage.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Target organs	Contains material which may cause damage to the following organs: blood, kidneys, liver, cardiovascular system, upper respiratory tract, central nervous system (CNS).
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	No specific data.
Skin	Adverse symptoms may include the following: irritation redness

Eyes	Adverse symptoms may include the following: irritation watering redness
Medical conditions aggravated by over-exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name			CAS number	% by weight
acetonitrile	75-05-8	70 - 85	-	

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.

Section 4. First aid measures

Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Fire-fighting measures

Flammability of the product	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Extinguishing media	
Suitable	Use dry chemical, CO_2, water spray (fog) or foam.
Not suitable	Do not use water jet.
Special exposure hazards	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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Special protective equipment for fire-fighters	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	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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

Handling

Put on appropriate personal protective equipment (see Section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store between the following temperatures: 4 to 30°C (39.2 to 86°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient	List name	TWA (8 hours) ppm	TWA (8 hours) mg/m³	TWA (8 hours) Other	STEL (15 mins) ppm	STEL (15 mins) mg/m³	STEL (15 mins) Other	Ceiling ppm	Ceiling mg/m³	Ceiling Other	Notations
acetonitrile	US ACGIH 6/2013	20	-	-	-	-	-	-	-	-	[1] [A]
	AB 4/2009	20	34	-	-	-	-	-	-	-	[3]
	BC 7/2013	20	-	-	-	-	-	-	-	-	[1]
	ON 1/2013	20	-	-	-	-	-	-	-	-	[1]
	QC 12/2012	40	67	-	60	101	-	-	-	-	

[1]Absorbed through skin. [3]Skin sensitization
Notes: [A]Refers to Appendix A -- Carcinogens. 2002 Adoption.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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.

Personal protection

Respiratory

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

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.

Eyes

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 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

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.
When there is a risk of ignition from static electricity, wear anti-static protective clothing.
For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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.
Other protection	Not available.
Personal protective equipment (Pictograms)	Not available.

Section 9. Physical and chemical properties

Physical state	Liquid. [(White suspension in closed column.)]
Flash point	Closed cup: 15 to 20°C (59 to 68°F)
Burning time	Not applicable.
Burning rate	Not applicable.
Color	solution : Colorless. / Suspension. : White.
Odor	Ethereal. / Sweetish.
Volatility	70 to 85% (w/w)
Odor threshold	40 ppm
SADT	Not available.
Solubility	Not available.

Section 10. Stability and reactivity

Chemical stability	The product is stable.
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
acetonitrile	LC50 Inhalation Gas.	Rat	17100 ppm	4 hours
	LD50 Dermal	Rabbit	980 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-

Conclusion/Summary Not available.

Chronic toxicity

Not available.

Conclusion/Summary Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary Not available.

Sensitizer

Not available.

Conclusion/Summary Not available.

Carcinogenicity

Not available.

Conclusion/Summary Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
acetonitrile	A4	-	D	-	-	-

Mutagenicity

Not available.

Conclusion/Summary Not available.

Teratogenicity

Not available.

Conclusion/Summary Not available.

Reproductive toxicity

Not available.

Conclusion/Summary	Not available.
Synergistic products	Not available.

Section 12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 3600000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 1000000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 160000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

Conclusion/Summary Not available.

Persistence/degradability

Partition coefficient: n-octanol/water Not available.

Bioconcentration factor Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

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

RCRA classification Not available.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetonitrile (I,T)	75-05-8	Listed	U003

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1648	Acetonitrile mixture. Marine pollutant (acetonitrile) RQ (acetonitrile)	3	II	 	**Reportable quantity** 6451.6 lbs / 2929 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Classification	UN1648	Acetonitrile mixture	3	II		-
Mexico Classification	UN1648	Acetonitrile mixture	3	II		-

ADR/RID Class	UN1648	Acetonitrile mixture	3	II		-
IMDG Class	UN1648	Acetonitrile mixture	3	II		-
IATA-DGR Class	UN1648	Acetonitrile mixture	3	II		-

PG* : Packing group

Section 15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada)
Class B-2: Flammable liquid
Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI The following components are listed: Acetonitrile

CEPA Toxic substances None of the components are listed.

Canada inventory Not determined.

International regulations

International lists
Australia inventory (AICS): Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

Section 16. Other information

The customer is responsible for determining the PPE code for this material.

Indicates information that has changed from previously issued version.

History

Date of printing	11 February 2015	**Date of previous issue**	06 May 2014
Date of issue	21 November 2014	**Version**	2.01

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.