

Revision Date 06-Dec-2023

Revision Number 4

NGHS / English

1. IDENTIFICATION

Product identifier

Product Name mRNA Product in Aqueous Solution

Other means of identification

Product Code(s) CAS11195, CAS11196, CAS11859, CAS11860, CASXXXXX, PNPXXXXX, HD-BIOPR12365, KIT-TNT-XX-XX

Synonyms

Recommended use of the chemical and restrictions on use

Recommended Use For research use only

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification Dharmacon, Inc.,
Revvity, Inc.

Address 2650 Crescent Drive Suite 100,
Lafayette, CO 80026

Telephone Tel: 303-604-9499
Fax: 303-604-9680

E-mail Technical@horizondiscovery.com

Emergency telephone number

Company Emergency Phone Number Chemtrec International: 1-703-741-5970

2. HAZARDS IDENTIFICATION

Classification

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance No information available

Physical state Solid Pellets

Odor No information available

GHS Label elements, including precautionary statements

Hazard statements**Other information****3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance****Synonyms** Ribonucleic acid oligonucleotide

Chemical name	CAS-No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
RNA	63231-63-0	1	-	-
Aqueous Solution	-	99	-	-

4. FIRST AID MEASURES**First aid measures**

Inhalation Remove to fresh air. (Call a physician if symptoms occur).

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash off immediately with plenty of water. Get medical attention if symptoms occur.

Ingestion DO NOT induce vomiting. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed**Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.**Specific hazards arising from the chemical** No information available.

Explosion Data**Sensitivity to Mechanical Impact** None.**Sensitivity to Static Discharge** None.**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal precautions** Ensure adequate ventilation. Use personal protective equipment as required. Avoid generation of dust.**Methods and material for containment and cleaning up****Methods for containment** Prevent further leakage or spillage if safe to do so.**Methods for cleaning up** Vacuum or sweep material and place in a disposal container. Avoid generation of dust.**7. HANDLING AND STORAGE****Precautions for safe handling****Advice on safe handling** Ensure adequate ventilation. Use personal protection equipment. Avoid generation of dust.**Conditions for safe storage, including any incompatibilities****Storage Conditions** Keep tightly closed in a dry place. Keep at -80°C.**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.**Appropriate engineering controls****Engineering controls** Showers
Eyewash stations
Ventilation systems.**Individual protection measures, such as personal protective equipment****Eye/face protection** Wear safety glasses with side shields (or goggles).**Skin and body protection** Wear suitable protective clothing.

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Liquid
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u> <u>Method</u>
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Incompatible materials. Excessive heat. Exposure to air or moisture over prolonged periods.

Incompatible materials Alcohols.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity

Unknown acute toxicity No information available

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and Degradability	No information available.
Bioaccumulation	There is no data for this product.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
UN-No.	UN1845
Proper Shipping Name	Carbon Dioxide, Solid
Hazard Class	9
Subsidiary class	III

<u>TDG</u>	Not regulated
UN Number	UN1845
Proper Shipping Name	Carbon Dioxide, Solid
Hazard Class	9
Subsidiary class	III

<u>MEX</u>	Not regulated
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<u>ICAO</u>	Not regulated
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<u>IATA</u>	Not regulated
UN Number	UN1845
Proper Shipping Name	Carbon Dioxide, Solid
Hazard Class	9
Subsidiary class	III

<u>IMDG</u>	Not regulated
UN Number	UN1845
Proper Shipping Name	Carbon Dioxide, Solid
Hazard Class	9
Packing group	III

<u>RID</u>	Not regulated
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ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances above threshold limits that are regulated by state right-to-know.

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Personal Protection X

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Revision Date 06-Dec-2023

Revision Note No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet