SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Contact information

General
Fluidigm Corporation
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South San Francisco, CA  94080
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E-mail: techsupport@fluidigm.com

Emergency telephone number
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+ (866) 358-4354 (toll free)

Product identifier
Part Number: 102-0682, 102-0683, 102-0684, 102-0686
Fluorescently-Labeled Oligonucleotides

Synonyms
Oligonucleotides - deoxyribonucleic acid (DNA)

Trade names
2019-nCoV Probe & Primer EUA kit (102-0686); RP Oligo Mix (102-0682);
2019-nCoV N1 Oligo Mix (102-0683); 2019-nCoV N2 Oligo Mix (102-0684)

Chemical family
Mixture

Relevant identified uses of the substance or mixture and uses advised against
In Vitro Diagnostic Kit for Emergency Use Authorization Only.

Note
This SDS is written to address potential worker health and safety issues associated with the handling of the formulated product.

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System [GHS]
Not classified

Label elements
SECTION 2 - HAZARDS IDENTIFICATION …continued

GHS hazard pictogram None required
GHS signal word None required
GHS hazard statements None required
GHS precautionary statements None required

Other hazards
The potential health hazards associated with exposure/handling of this mixture are unknown; no data specific for the mixture were identified. The following data describe the hazards of individual ingredients, where applicable.

Note
This mixture does not meet criteria for classification under GHS as implemented by Regulation EC No 1272/2008 (EU CLP), WHMIS 2015 (Health Canada), and Hazard Communication Standard No. 1910.1200 (US OSHA). Nevertheless, it should be handled with caution as it has not yet been fully tested.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>EINECS/ELIN CS#</th>
<th>Amount</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris-Hydrochloride</td>
<td>1185-53-1</td>
<td>214-684-5</td>
<td>≤1%</td>
<td>SI2: H315; EI2: H319; STOT-SE3: H335</td>
</tr>
</tbody>
</table>

Note
The ingredients listed above are considered hazardous and/or are one of the primary ingredients. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

Immediate Medical Attention Needed
No. If exposed or concerned: Get medical advice/attention.

Eye Contact
If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.

Skin Contact
Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

Inhalation
Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.
SECTION 4 - FIRST AID MEASURES …continued

**Ingestion**
If swallowed, call a physician immediately. Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. If signs/symptoms occur, get medical attention.

**Protection of first aid responders**
See Section 8 for Exposure Controls/Personal Protection recommendations.

**Most important symptoms and effects, both acute and delayed**
See Sections 2 and 11

**Indication of immediate medical attention and special treatment needed, if necessary**
Medical conditions aggravated by exposure: None known or reported. Treat symptomatically and supportively.

SECTION 5 - FIREFIGHTING MEASURES

**Extinguishing media**
In case of fire in the surroundings: Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate.

**Specific hazards arising from the substance or mixture**
May emit carbon monoxide, carbon dioxide, and chlorine-containing compounds.

**Flammability/Explosivity**
No explosivity or flammability data identified. As product is an aqueous solution, it is not expected to be flammable or explosive.

**Advice for firefighters**
In case of fire in the surroundings: use the appropriate extinguishing agent. Wear full protective clothing and an approved, positive pressure, self-contained breathing apparatus. Wash all equipment thoroughly after use.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated. Do not breathe mist/vapors/spray.

**Environmental precautions**
Avoid release to the environment.

**Methods and material for containment and cleaning up**
For small spills, soak up material with absorbent, e.g., paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13). Decontaminate the area twice.
SECTION 6 - ACCIDENTAL RELEASE MEASURES …continued

Reference to other sections See Sections 8 and 13 for more information.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling
Follow recommendations for handling pharmaceutical agents (i.e., use of engineering controls and/or other personal protective equipment if needed). Avoid contact with eyes, skin, other mucous membranes or clothing. Wash thoroughly after handling. Use with adequate ventilation. Keep container tightly closed. Avoid breathing vapor/mist/spray.

Conditions for safe storage including any incompatibilities
Store at -20°C, away from incompatible materials.

Specific end use(s)
In Vitro Diagnostic Kit for Emergency Use Authorization Only.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Note Dispose of broken vials/syringes in a sharps container.

Control Parameters/Occupational Exposure Limit Values

<table>
<thead>
<tr>
<th>Compound</th>
<th>Issuer</th>
<th>Type</th>
<th>OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris-Hydrochloride</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Exposure/Engineering controls
Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Use local exhaust and/or enclosure at aerosol/mist-generating points. Emphasis is to be placed on closed material transfer systems and process containment, with limited open handling. High-energy operations should be done within an approved emission control or containment system.

Respiratory protection
Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. An approved and properly fitted air-purifying respirator with HEPA filters may be considered to provide ancillary protection based on the known or foreseeable limitations of existing engineering controls.

Hand protection
Wear nitrile or other impervious gloves if skin contact is possible. Double gloves should be considered.

Skin protection
Wear appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use.

Eye/face protection
Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION …continued

Environmental Exposure Controls

Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.

Other protective measures

Wash hands in the event of contact with this product/mixture, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors).

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Liquid

Color

Clear, colorless

Odor

No information identified.

Odor threshold

No information identified.

pH

No information identified.

Melting point/freezing point

No information identified.

Initial boiling point and boiling range

No information identified.

Flash point

No information identified.

Evaporation rate

No information identified.

Flammability (solid, gas)

No information identified.

Upper/lower flammability or explosive limits

No information identified.

Vapor pressure

No information identified

Vapor density

No information identified.

Relative density

No information identified.

Water solubility

Miscible with water

Solvent solubility

No information identified.
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES …continued

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
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</thead>
<tbody>
<tr>
<td>Partition coefficient (&lt;i&gt;n-octanol/water&lt;/i&gt;)</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information identified.</td>
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Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
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<tbody>
<tr>
<td>Molecular formula</td>
<td>Not applicable (Mixture)</td>
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<tr>
<td>Molecular weight</td>
<td>Not applicable (Mixture)</td>
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SECTION 10 - STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No information identified.</td>
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<tr>
<td>Chemical stability</td>
<td>No information identified.</td>
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<tr>
<td>Possibility of hazardous reactions</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No information identified.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No information identified.</td>
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<tr>
<td>Hazardous decomposition products</td>
<td>No information identified.</td>
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</table>

SECTION 11 - TOXICOLOGICAL INFORMATION

Note

No data for this product/mixture were identified. The following data describe the active ingredient and/or the individual ingredients where applicable.

Information on toxicological effects

<table>
<thead>
<tr>
<th>Route of entry</th>
<th>May be absorbed by inhalation, skin contact, and eye contact.</th>
</tr>
</thead>
</table>

Acute toxicity

<table>
<thead>
<tr>
<th>Compound</th>
<th>Type</th>
<th>Route</th>
<th>Species</th>
<th>Dose</th>
</tr>
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<tr>
<td>Tris-Hydrochloride</td>
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<td>--</td>
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</tr>
</tbody>
</table>

Irritation/Corrosion

Tris-hydrochloride is considered irritating to eyes, skin, and respiratory tract.
SECTION 11 - TOXICOLOGICAL INFORMATION …continued

Sensitization No data on product formulation.
STOT-single exposure No data on product formulation.
STOT-repeated exposure/Repeat-dose toxicity No data on product formulation.
Reproductive toxicity No data on product formulation.
Developmental toxicity No data on product formulation.
Genotoxicity No data on product formulation.
Carcinogenicity No data on product formulation. None of the components of the product/mixture present at levels greater than or equal to 0.1% are listed by NTP, IARC, ACGIH or OSHA as a carcinogen.

Aspiration hazard No data on product formulation.
Human health data See "Section 2 - Other Hazards"
Additional information The toxicological properties of this mixture have not been fully characterized.

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity

<table>
<thead>
<tr>
<th>Compound</th>
<th>Type</th>
<th>Species</th>
<th>Concentration</th>
</tr>
</thead>
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<tr>
<td>Tris-Hydrochloride</td>
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<td>--</td>
</tr>
</tbody>
</table>

Persistence and Degradability No data on product formulation.
Bioaccumulative potential No data on product formulation.
Mobility in soil No data on product formulation.
Results of PBT and vPvB assessment Not performed.
Other adverse effects No data on product formulation.

Note The environmental characteristics of this product/mixture have not been fully investigated. Releases to the environment should be avoided.
SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods

Used product should be disposed of according to local, state, and federal regulations. Do not discharge into sanitary drains (e.g. non-process drains) or down the toilet. All wastes containing the material should be properly labeled. Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or on-site wastewater treatment facility.

SECTION 14 - TRANSPORT INFORMATION

Transport

Based on the available data, this product/mixture is not regulated as a hazardous material under US DOT, Canada TDG, IATA, IMDG or EU ADR/RID.

UN number

None assigned.

UN proper shipping name

None assigned.

Transport hazard classes and packing group

None assigned.

Environmental hazards

Based on the available data, this product/mixture is not regulated as an environmental hazard or a marine pollutant.

Special precautions for users

Avoid release to the environment.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15 - REGULATORY INFORMATION

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

This SDS generally complies with the requirements listed under current guidelines in the US, EU and Canada. Consult your local or regional authorities for more information.

Chemical safety assessment

Not conducted.

TSCA status

Not listed.

SARA section 313

Not listed.

California proposition 65

Not listed.
SECTION 15 - REGULATORY INFORMATION …continued

Additional information
No other information identified.

SECTION 16 - OTHER INFORMATION

Full text of H phrases and GHS classifications

Sources of data
Information from published literature and internal company data.

Abbreviations
ACGIH - American Conference of Governmental Industrial Hygienists; ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA - American Industrial Hygiene Association; CAS# - Chemical Abstract Services Number; CLP - Classification, Labelling, and Packaging of Substances and Mixtures; DNEL - Derived No Effect Level; DOT - Department of Transportation; EINECS - European Inventory of New and Existing Chemical Substances; ELINCS - European List of Notified Chemical Substances; EU - European Union; GHS - Globally Harmonized System of Classification and Labeling of Chemicals; IARC - International Agency for Research on Cancer; IDLH - Immediately Dangerous to Life or Health; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LOEL - Lowest Observed Effect Level; LOAEL - Lowest Observed Adverse Effect Level; NIOSH - The National Institute for Occupational Safety and Health; NOEL - No Observed Effect Level; NOAEL - No Observed Adverse Effect Level; NTP - National Toxicology Program; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration; PBT - Persistent, Bioaccumulative, and Toxic; PNEC - Predicted No Effect Concentration; SARA - Superfund Amendments and Reauthorization Act; STOT - Specific Target Organ Toxicity; STEL - Short Term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Issue Date
November 2020

Revisions
Revision 01: CHG-002709: This is the first version of this SDS.
SECTION 16 - OTHER INFORMATION…continued

Disclaimer
Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product. For In Vitro Diagnostic Use. For Emergency Use Authorization Only. RX only. This test has not been FDA cleared or approved. This test has been authorized by FDA under an EUA for use by authorized laboratories. This test has been authorized only for the detection of nucleic acid from SARS-CoV-2, not for any other viruses or pathogens. This test is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.