

# SAFETY DATA SHEET

Product Identifier: Maxpar® Cell Acquisition Solution  
Catalog ID number: 201237

SDS ID: MSDS-201237

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### Contact information

<b>General</b>	Fluidigm Corporation 2 Tower Place, Suite 2000, South San Francisco, CA 94080 Main (U.S.): +1 (650) 266-6000 E-mail: techsupport@fluidigm.com
<b>Emergency telephone number</b>	+ (650) 266-6100 (outside US) + (866) 358-4354 (toll free)

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<b>Product identifier</b>	Maxpar® Cell Acquisition Solution
<b>Synonyms</b>	Nitram®, ammonia nitrate
<b>Trade names</b>	None identified
<b>Chemical family</b>	Mixture; contains ammonium nitrate
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	<i>For Research Use Only. Not for use in diagnostic procedures.</i>

<b>Note</b>	This SDS is written to address potential health and safety issues associated with the handling of the formulated product. The pharmacological, toxicological and ecological properties of this mixture have not been fully characterized. This SDS will be revisited as more data become available.
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## SECTION 2: HAZARDS IDENTIFICATION

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### Classification of the substance or mixture

<b>Globally Harmonized System [GHS]</b>	Not classified
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### Label elements

<b>CLP/GHS hazard pictogram</b>	None required
<b>CLP/GHS signal word</b>	None required
<b>CLP/GHS hazard statements</b>	None required
<b>CLP/GHS precautionary statements</b>	None required

<b>Other hazards</b>	No information was identified for the mixture. The mixture contains small amounts of ammonium nitrate. Ammonium nitrate is irritating to the eyes and may be irritating to the respiratory tract. Ingestion of ammonium nitrate may cause methemoglobinemia (a disorder where oxygen is inefficiently transported in the blood).
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<b>Note</b>	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.
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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Ingredient</u>	<u>CAS No.</u>	<u>EINECS/ ELINCS No.</u>	<u>Amount</u>	<u>GHS Classification</u>
Ammonium nitrate	6484-52-2	229-347-8	<0.1%	OS3:H272; EI2:H319

**Note** The ingredient(s) listed above are considered hazardous. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

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## SECTION 4: FIRST-AID MEASURES

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### Description of first-aid measures

<b>Immediate medical attention needed</b>	No
<b>Eye contact</b>	If irritation occurs or persists, notify medical personnel and supervisor.
<b>Skin contact</b>	Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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. Notify medical personnel and supervisor.
<b>Protection of first-aid responders</b>	See Section 8 for Exposure Controls/Personal Protection recommendations.
<b>Most important symptoms and effects, both acute and delayed</b>	See Sections 2 and 11.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Contains low levels of ammonium nitrate. Medical conditions aggravated by exposure: none known or reported. Treat symptomatically and supportively.

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## SECTION 5: FIREFIGHTING MEASURES

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<b>Extinguishing media</b>	Use dry powder or dry sand.
<b>Specific hazards arising from the substance or mixture</b>	No information identified. May emit carbon monoxide, carbon dioxide and nitrogen-containing compounds.
<b>Flammability/explosivity</b>	No information identified. As an aqueous solution, it is not expected to be flammable or explosive.
<b>Advice for firefighters</b>	Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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<b>Personal precautions, protective equipment and emergency procedures</b>	If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Do not breathe dust/mist/vapors/spray.
<b>Environmental precautions</b>	Do not empty into drains. Avoid release to the environment.

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**Methods and material for containment and cleaning up** DO NOT CAUSE MATERIAL TO BECOME AIRBORNE. 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.

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

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling** Wear appropriate protective equipment when handling. Avoid contact with skin and eyes. Avoid breathing vapor/mist/spray.

**Conditions for safe storage including any incompatibilities** Store at 2–8 °C in tightly closed container. Avoid strong oxidizers. Store in sealed containers that are appropriately labeled.

**Specific end use(s)** No information identified.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

### Control Parameters/Occupational Exposure Limit values

<u>Compound</u>	<u>Issuer</u>	<u>Type</u>	<u>OEL</u>
Ammonium nitrate	--	--	--

**Exposure/engineering controls** Control exposures to below the OEL (if available). 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. Use engineered local exhaust ventilation (LEV) and/or enclosure for procedures where aerosolization may occur, such as opened transfers, pumping, and spraying. Solutions can be handled outside a containment system or without LEV during procedures with no potential for aerosolization. All containers for solutions and slurries must be covered while being transferred.

**Respiratory protection** Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. At a minimum, a tight-fitting full-face respirator with high-efficiency particulate air (HEPA) filters is required when performing aerosol-generating operations. A powered air-purifying respirator (PAPR) with HEPA filters and head cover is required for spill cleanup.

**Hand protection** Wear nitrile or other impervious gloves if skin contact is possible. When the material is diluted in an organic solvent, wear gloves that provide protection against the solvent.

**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.

**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).

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**Information on basic physical and chemical properties**

<b>Appearance</b>	Clear liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor threshold</b>	No information identified
<b>pH</b>	5.4 to 6.0
<b>Melting point/freezing point</b>	169 °C
<b>Initial boiling point and boiling range</b>	210 °C
<b>Flash point</b>	No information identified
<b>Evaporation rate</b>	No information identified
<b>Flammability (solid, gas)</b>	No information identified
<b>Upper/lower flammability or explosive limits</b>	No information identified
<b>Vapor pressure</b>	No information identified
<b>Vapor density</b>	No information identified
<b>Relative density</b>	No information identified
<b>Water solubility</b>	Soluble in water
<b>Solvent solubility</b>	No information identified
<b>Partition coefficient (<i>n</i>-octanol/water)</b>	No information identified
<b>Auto-ignition temperature</b>	No information identified
<b>Decomposition temperature</b>	No information identified
<b>Viscosity</b>	No information identified
<b>Explosive properties</b>	No information identified
<b>Oxidizing properties</b>	Ammonium nitrate is an oxidizer.

**Other information**

<b>Molecular weight</b>	Not applicable (mixture)
<b>Molecular formula</b>	Not applicable (mixture)

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**SECTION 10: STABILITY AND REACTIVITY**

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**Reactivity** Ammonium nitrate may react with strong bases.

**Chemical stability** Stable under normal temperatures and pressures

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<b>Possibility of hazardous reactions</b>	No information identified
<b>Conditions to avoid</b>	No information identified
<b>Incompatible materials</b>	Reducing agents, powdered metals, strong acids
<b>Hazardous decomposition products</b>	No information identified

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

**Route of entry** May be absorbed by inhalation, skin contact and ingestion

#### Acute toxicity

<u>Compound</u>	<u>Type</u>	<u>Route</u>	<u>Species</u>	<u>Dose</u>
Ammonium nitrate	LD <sub>50</sub>	Oral	Rat	2217 mg/kg
	LC <sub>50</sub>	Inhalation	Rat	>88.8 mg/L
	LD <sub>50</sub>	Dermal	Rat	>5000 mg/kg

**Irritation/corrosion** Ammonium nitrate is not irritating to rabbit skin, but was irritating to rabbit eyes.

**Sensitization** Not a skin sensitizer

**STOT: single exposure** No studies identified

**STOT: repeated exposure/repeat-dose toxicity** No effects were reported at inhalation doses up to 1 mg/m<sup>2</sup>, 6 hours/day, 5 days/week, for 4 weeks.

**Reproductive toxicity** No studies identified

**Developmental toxicity** No studies identified

**Genotoxicity** Ammonium nitrate was negative for mutagenicity in an Ames assay.

**Carcinogenicity** No studies identified. This mixture is not listed by NTP, IARC, ACGIH or OSHA as a carcinogen.

**Aspiration hazard** No data available

**Human health data** See Section 2, "Other hazards"

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

<u>Compound</u>	<u>Type</u>	<u>Species</u>	<u>Concentration</u>
Ammonium nitrate	LC <sub>50</sub> (48 h)	Cyprinus carpio (carp)	447 mg/L

**Additional toxicity information** No data identified

**Persistence and degradability** No data identified

**Bioaccumulative potential** No data identified

**Mobility in soil** No data identified

**Results of PBT and vPvB assessment** Not performed

**Other adverse effects** No data identified

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**Note** The environmental characteristics of this product/mixture have not been fully investigated. The above data are for the active ingredient and/or any other ingredient(s) where applicable. Although present at low concentrations, disposal should consider that ammonium nitrate is present. Releases to the environment should be avoided.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods** Dispose of wastes in accordance to prescribed federal, state and local guidelines, e.g., an appropriately permitted chemical waste incinerator. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or onsite wastewater treatment facility.

## SECTION 14: TRANSPORT INFORMATION

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

**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 mixture is not regulated as an environmental hazard or a marine pollutant.

**Special precautions for users** No special precautions needed. Avoid release to the environment.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable

**Hazchem Code/HIN** None assigned

## 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** Ammonium nitrate is listed.

**SARA Section 313** Nitrate compounds are listed.

**California Proposition 65** Not listed.

**Component analysis: state** Ammonium nitrate is listed in MA, NJ, PA and RI.

**Component analysis: chemical inventory** Ammonium nitrate is listed in the chemical inventory of the following countries: Australia, Canada, China, EU, Mexico, New Zealand, the Philippines and Vietnam.

**Additional information** No other information identified

## SECTION 16: OTHER INFORMATION

**NFPA Ratings**                      **Ammonium nitrate**    **Health: 0**                      **Fire: 0**                      **Reactivity: 3**

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**Full text of H phrases and GHS classifications**

OS3, Oxidizing solid Category 3; H272, May intensify fire, oxidizer; E12, Eye irritant Category 2; H319, Causes serious eye irritation.

**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; CA, California; CAS No., 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; HI, Hawaii; HIN, hazard identification number; IARC, International Agency for Research on Cancer; IBC, International Building Code; 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; MA, Massachusetts; MARPOL, International Convention for the Prevention of Pollution from Ships; MN, Minnesota; NFPA, National Fire Protection Association; NJ, New Jersey; 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; PA, Pennsylvania; PBT, persistent, bioaccumulative and toxic; PNEC, Predicted No Effect Concentration; RI, Rhode Island; SARA, Superfund Amendments and Reauthorization Act; STEL, Short Term Exposure Limit; STOT, specific target organ toxicity; TDG, Transportation of Dangerous Goods; TSCA, Toxic Substances Control Act; TWA, Time Weighted Average; vPvB, very persistent and very bioaccumulative; VT, Vermont; WA, Washington; WHMIS, Workplace Hazardous Materials Information System

**Issue Date**

May-2020

**Revisions**

Revision 2.0;: CHG-001511  
Summary of revision: Updated Fluidigm Corporate Address in section 1, Issue date and revision in footer ,section 1 and 16.

**Disclaimer**

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