Rehydragel™ CG
Safety Data Sheet
Revision Date: 03/29/2017 Date of Issue: 05/01/2015 Version: 3.0

SECTION 1: IDENTIFICATION
Product Identifier
Product Form: Mixtures
Product Name: Rehydragel™ CG, Aluminum Hydroxide Compressed Paste

Intended Use of the Product
Pharmaceutical Ingredient. Vaccine Adjuvant, Protein Separations. For Professional Use Only.

Name, Address, and Telephone of the Responsible Party
Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number
Emergency Number:
Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
INTERNATIONAL: +1-703-741-5970
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION
Classification of the Substance or Mixture
GHS Classification
Not classified

Label Elements
GHS Labeling
No labeling applicable

Other Hazards
If allowed to dry, product may produce mechanical irritation of the eyes, skin, and respiratory system. If spilled product presents a slip hazard.

Unknown acute toxicity
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (CAS-No.) 7732-18-5</td>
<td>83 - 87</td>
<td>Not classified</td>
<td></td>
</tr>
<tr>
<td>Aluminum hydroxide (Al(OH)₃) (CAS-No.) 21645-51-2</td>
<td>13 - 17</td>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES
Description of First-aid Measures
General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin Contact: Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.
**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell.

### Most Important Symptoms and Effects Both Acute and Delayed

- **General:** None expected under normal conditions of use.
- **Inhalation:** May cause irritation to the respiratory tract.
- **Skin Contact:** May cause mild skin irritation.
- **Eye Contact:** May cause minor eye irritation.
- **Ingestion:** Ingestion may cause adverse effects.
- **Chronic Symptoms:** None known.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

**SECTION 5: FIRE-FIGHTING MEASURES**

**Extinguishing Media**

- **Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.
- **Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special Hazards Arising From the Substance or Mixture**

- **Fire Hazard:** Product is not flammable.
- **Explosion Hazard:** Product is not explosive.
- **Reactivity:** Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters**

- **Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.
- **Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. Do not allow run-off from fire-fighting to enter drains or water courses.
- **Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.
- **Hazardous Combustion Products:** Oxides of aluminum.

**Reference to Other Sections**

Refer to Section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

- **General Measures:** Do not breathe vapor, mist or spray.

**For Non-Emergency Personnel**

- **Protective Equipment:** Use appropriate personal protective equipment (PPE).
- **Emergency Procedures:** Evacuate unnecessary personnel.

**For Emergency Personnel**

- **Protective Equipment:** Equip cleanup crew with proper protection.
- **Emergency Procedures:** Ventilate area. Stop leak if safe to do so.

**Environmental Precautions**

Prevent entry to sewers and public waters.

**Methods and Materials for Containment and Cleaning Up**

- **For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- **Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container.

**Reference to Other Sections**

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

- **Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

**Conditions for Safe Storage, Including Any Incompatibilities**

- **Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
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Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Specific End Use(s)
Pharmaceutical Ingredient. Vaccine Adjuvant, Protein Separations. For Professional Use Only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls
Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure, but are not required. Product to be handled under strictly controlled conditions. Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White Paste, Gelatinous Precipitate</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 8</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Flammable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.01 - 1.25</td>
</tr>
<tr>
<td>Solubility</td>
<td>Negligible</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Shear Thinning</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under normal conditions.
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Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Hazardous Decomposition Products: None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION
Information on Toxicological Effects - Product
- Acute Toxicity (Oral): Not classified
- Acute Toxicity (Dermal): Not classified
- Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified
pH: 6 - 8

Eye Damage/Irritation: Not classified
pH: 6 - 8

Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified

Symptoms/Effects After Inhalation: May cause irritation to the respiratory tract.
Symptoms/Effects After Skin Contact: May cause mild skin irritation.
Symptoms/Effects After Eye Contact: May cause minor eye irritation.
Symptoms/Effects After Ingestion: Ingestion may cause adverse effects.
Chronic Symptoms: None known.

Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

<table>
<thead>
<tr>
<th>Aluminum hydroxide (Al(OH)₃) (21645-51-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION
Toxicity
Ecology - General: Not classified.

Persistence and Degradability
Rehydragel™ CG, Aluminum Hydroxide Compressed Paste
Persistency and Degradability: Not established.

Bioaccumulative Potential
Rehydragel™ CG, Aluminum Hydroxide Compressed Paste
Bioaccumulative Potential: Not established.

Mobility in Soil
Not available

Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION
The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.
Not regulated for transport according to: US DOT, IMDG, IATA, and Canada’s TDG.

**SECTION 15: REGULATORY INFORMATION**

**US Federal Regulations**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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<tbody>
<tr>
<td>Aluminum hydroxide (Al(OH)₃) (21645-51-2)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>No</td>
</tr>
</tbody>
</table>

SARA 311/312
Not present

**US TSCA Flags**
Not present

**US State Regulations**

**California Proposition 65**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide (Al(OH)₃) (21645-51-2)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**State Right-To-Know Lists**

**Aluminum hydroxide (Al(OH)₃) (21645-51-2)**

- U.S. - Massachusetts - Right To Know List - No
- U.S. - New Jersey - Right to Know Hazardous Substance List - No
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - No
- U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
- U.S. - Pennsylvania - RTK (Right to Know) List - No

**Canadian Regulations**

**Aluminum hydroxide (Al(OH)₃) (21645-51-2)**

Listed on the Canadian DSL (Domestic Substances List)
Not listed on the Canadian NDSL (Non-Domestic Substances List)

**International Inventories/Lists**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Australia AICS</th>
<th>Turkey CICR</th>
<th>Korea ECL</th>
<th>EU EINECS</th>
<th>EU ELINCS</th>
<th>EU SVHC</th>
<th>EU NLP</th>
<th>Mexico INSQ</th>
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</thead>
<tbody>
<tr>
<td>Aluminum hydroxide (Al(OH)₃) (21645-51-2)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>China IECSC</th>
<th>Japan ENCS</th>
<th>Japan ISHL</th>
<th>Japan PDSCL</th>
<th>Japan PRTR</th>
<th>Philippines PICCS</th>
<th>New Zealand NZIOC</th>
<th>US TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide (Al(OH)₃) (21645-51-2)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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**SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

**Revision Date**: 03/29/2017

**Revision Summary**

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
<th>Date Changed</th>
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<tbody>
<tr>
<td>2</td>
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<td>03/15/2017</td>
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<td>6</td>
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<tr>
<td>10</td>
<td>Language modified</td>
<td>03/15/2017</td>
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<tr>
<td>13</td>
<td>Language modified</td>
<td>03/15/2017</td>
</tr>
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</table>
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Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

GHS Full Text Phrases:

NFPA 704
NFPA Health Hazard: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA Fire Hazard: 1 - Materials that must be preheated before ignition can occur.
NFPA Reactivity Hazard: 0 - Material that in themselves are normally stable, even under fire conditions.

HMIS Rating
Health: 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability: 1 Slight Hazard
Physical: 0 Minimal Hazard
PPE: See Section 8

Abbreviations and Acronyms
AICS – Australian Inventory of Chemical Substances
ACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
BEI - Biological Exposure Indices (BEI)
CAS No. - Chemical Abstracts Service number
CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
CICR - Turkish Inventory and Control of Chemicals
EC50 - Median effective concentration
ECL - Korea Existing Chemicals List
EINECS - European Inventory of Existing Commercial Chemical Substances
ELINCS - European List of Notified Chemical Substances
EmS - IMDG Emergency Schedule Fire & Spillage
ENCS - Japanese Existing and New Chemical Substances Inventory
EPA – Environmental Protection Agency
EPRCA 304 RQ – EPCRA 304 Extremely Hazardous Substance Emergency Planning and Community Right-to-Know Act – Reportable Quantity
ERAP Index – Emergency Response Assistance Plan Quantity Limit
ErC50 - EC50 in Terms of Reduction Growth Rate
ERG code (IATA) - Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)
ERG No. - Emergency Response Guide Number
HCCL - Hazard Communication Carcinogen List
HMIS – Hazardous Materials Information System
IARC - International Agency for Research on Cancer
IAEA – International Atomic Energy Agency
IATA - International Air Transport Association – Dangerous Goods Regulations
ILDLH - Immediately Dangerous to Life or Health
IECSC - Philippine Inventory of Chemicals and Chemical Substances
IECSC - Philippine Inventory of Chemicals and Chemical Substances
IISC - Japanese Inventory of Chemical Substances
ISHL - Japan Industrial Safety and Health Law
LC50 - Median Lethal Concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest-observed-effect Concentration
Log Pow - Octanol/water Partition Coefficient
NIOH - National Institute for Occupational Safety and Health
NLP - Europe No Longer Polymers List
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NZIOC - New Zealand Inventory of Chemicals
OEL - Occupational Exposure Limits
OSHA – Occupational Safety and Health Administration
PEL - Permissible Exposure Limits
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PRTR - Japan Pollutant Release and Transfer Register
REL - Recommended Exposure Limit
SARA 302 - Section 302, 40 CFR Part 355
SARA 302 - Section 302, 40 CFR Part 355
SARA 311/312 - Sections 311 and 312, 40 CFR Part 370 Hazard Categories
SARA 313 - Section 313, 40 CFR Part 372
SARA 313 - Section 313, 40 CFR Part 372
SARCL - Specifically Regulated Carcinogen List
SARCL - Specifically Regulated Carcinogen List
STEL - Short Term Exposure Limit
SVHC – European Candidate List of Substance of Very High Concern
TWA - Time Weighted Average
TPQ – Threshold Planning Quantity
TSCA – United StatesToxic Substances Control Act
WEEL - Workplace Environmental Exposure Levels
Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA’S “Right to Know” (29 CFR 1910.1200) and Canada’s WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.