MATERIAL SAFETY DATA SHEET
BIO-GEL Bio-restorative Hydrogel

Section 1 – Product and Company Identification

Product Trade Name: BIO-GEL Bio-restorative Hydrogel

Distributor: Neocutis, Inc.
3053 Fillmore Street #140
San Francisco, California 94123
U.S.A.

Emergency Phone: 1-866-636-2884 (U.S.)
1-313-664-7546 (international)

Fax Number: 1-313-664-0668

Section 2 – Ingredients and Identity Information

<table>
<thead>
<tr>
<th>Ingredient Sequence Number</th>
<th>Ingredient</th>
<th>CAS Number</th>
<th>RTECS Number</th>
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<tr>
<td>1</td>
<td>Water (Aqua)</td>
<td>7732-18-5</td>
<td>ZC0110000</td>
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<td>2</td>
<td>Butylene Glycol</td>
<td>110-63-4</td>
<td>EK0525000</td>
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<td>3</td>
<td>Glycerin</td>
<td>56-81-5</td>
<td>MA8050000</td>
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<td>Carbomer</td>
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<td>AT4680000</td>
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<td>5</td>
<td>PEG-8</td>
<td>00-13-2</td>
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<td>6</td>
<td>Capryl Glycol</td>
<td>1117-86-8</td>
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<td>7</td>
<td>Carrageenan (Chondrus Crispus)</td>
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<td>8</td>
<td>Phenoxyethanol</td>
<td>122-99-6</td>
<td>KM0350000</td>
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<tr>
<td>9</td>
<td>Disodium EDTA</td>
<td>139-33-3</td>
<td>AH4375000</td>
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<td>10</td>
<td>Methylparaben</td>
<td>99-76-3</td>
<td>DH2450000</td>
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<tr>
<td>11</td>
<td>Processed Skin Proteins (PSP™)</td>
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<td>12</td>
<td>Butylparaben</td>
<td>94-26-8</td>
<td>DH1980000</td>
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<td>13</td>
<td>Sodium Hyaluronate</td>
<td>9067-32-7</td>
<td>MT7250000</td>
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<tr>
<td>14</td>
<td>Ethylparaben</td>
<td>120-47-8</td>
<td>DH2190000</td>
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</tbody>
</table>
Section 3 – Hazard Identification

Emergency Overview:
Appearance: Colorless and translucent gel
Caution: May cause eye and skin irritation.

<table>
<thead>
<tr>
<th>Hazardous Materials Identification System (HMIS)</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
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</thead>
<tbody>
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<td><img src="table.png" alt="Table" /></td>
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<table>
<thead>
<tr>
<th>National Fire Protection Association (NFPA) Ratings</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
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<tbody>
<tr>
<td><img src="table.png" alt="Table" /></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Potential Health Effects:
Routes of Exposure:

i) **Inhalation**
Mild irritation of eyes, nose and throat. May cause irritation to the respiratory tract. Low hazard for usual industrial handling.

ii) **Skin**
May cause skin irritation. Prolonged contact may cause irritation; occasionally dermatitis due to hypersensitivity occurs. Low hazard for usual industrial handling.

iii) **Ingestion**
May cause irritation of the digestive tract. Extremely large oral dosages may produce gastrointestinal disturbances. Low hazard for usual industrial handling.

iv) **Eye**
Mild irritant on prolonged exposure, causing reddening, possibly blurred vision. May cause irritation, redness and pain.

v) **Chronic Exposure**
Contact dermatitis may occur in individuals under extreme conditions of prolonged and repeated contact, high exposure and temperature, and occlusion (held onto the skin) by clothing. Prolonged exposure to elevated concentrations of vapors may result in irritation of the eyes, nose, and throat.

vi) **Conditions Aggravated by Exposure**
Persons with pre-existing skin disorders or eye problems or with impaired liver, kidney or respiratory function may be more susceptible to the effects of this product.

Section 4 – First Aid Measures

Take precautions to ensure your own health and safety before attempting rescue and providing first aid.

i) Inhalation
Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

ii) Eye
Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by occasionally lifting the upper and lower eyelids with fingers. If irritation develops, get medical aid.

iii) Skin
Flush with copious amounts of soap and water for at least 15 minutes. Remove contaminated shoes and clothing. Get medical aid if irritation develops or persists. Wash clothing before reuse. Thoroughly clean shoes before reuse.

iv) Ingestion
If victim is conscious and alert, give 2 - 4 cupfuls of milk. Never give anything by mouth to an unconscious person. Get medical aid. Product contains ingredients that are an aspiration hazard.

Notes to Physician: Treat symptomatically and supportively.

Section 5 – Fire Fighting

i) Flash Point: >200° F

ii) Autoignition Temperature: Not determined

iii) Flammable or Explosive Limits (approximate percent by volume in air)
Lower Explosive Limit: Not determined
Upper Explosive Limit: Not determined

iv) Extinguishing Media: Foam, water spray (fog), dry chemical carbon dioxide and vaporizing liquid type fire extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. It is recommended to plan fire protection
and response strategy through consultation with local fire protection authorities or
appropriate specialists.

v) **Fire Fighting Procedures:** Wear a self-contained breathing apparatus (SCBA)
equipped with a full face-piece and operated in a pressure-demand mode (or other
positive pressure mode) and approved protective clothing. Personnel without
suitable respiratory protection must leave the area to prevent significant exposure
to hazardous gases from combustion, burning, or decomposition. In an enclosed or
poorly ventilated area, wear SCBA during cleanup immediately after a fire as well
as during the attack phase of firefighting operations. During a fire, irritating and
highly toxic gases may be generated by thermal decomposition or combustion.

vi) **Decomposition:** During a fire, irritating and highly toxic gases may be generated
by thermal decomposition or combustion. Nitrous oxides, CO, CO₂.

**Section 6 – Accidental Release Measures**

i) **Steps To Be Taken In Case Material Is Released Or Spilled:** Scrape up material
into waste container or absorb with dry sand or oil absorbent. Clean spill with
detergent solution or safety solvent. Provide adequate ventilation during cleanup
procedures.

**Section 7 – Handling and Storage**

i) **Handling:** Wash thoroughly after handling. Wash hand before eating. Remove
contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and
clothing. Keep container tightly closed. Avoid ingestion and inhalation.

ii) **Storage:** Store in a tightly closed container. Keep from contact with oxidizing
materials. Store in a cool, dry, well-ventilated area away from incompatible
substances.

iii) **Waste:** Dissolve or mix the material with a combustible solvent and burn in a
chemical incinerator equipped with an afterburner and scrubber. Observe all
federal, state and local environmental regulations.

**Section 8 – Exposure Controls and Personal Protection**

i) **Exposure limit for total product:** Not available

ii) **Ventilation:** A system of local and/or general exhaust is recommended to keep
employee exposures as low as possible. Local exhaust ventilation is generally
preferred because it can control the emissions of the contaminant at its source,
preventing dispersions of it into the general work area.
iii) **Respiratory Protection:** Not expected to require personal respirator usage.

iv) **Skin Protection:** Wear appropriate protective gloves to prevent skin exposure. Wear appropriate protective clothing to prevent skin exposure.

v) **Eye Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.134. Maintain eye wash fountain and quick-drench facilities in work area.

vi) **Personal Hygiene:** Clean PPE and work clothing contaminated with product prior to use.

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### Section 9 – Physical and Chemical Properties

i) **Appearance:** Transparent soft gel, colorless

ii) **Viscosity:** $36'000 \pm 9'000$ mPa·s

iii) **pH:** $6.1 \pm 0.3$

### Section 10 – Stability and Reactivity

i) **Stability:** Stable under ordinary conditions of use and storage. Hazardous polymerization will not occur.

ii) **Materials to avoid:** Oxidizing agents.

### Section 11 – Toxicological Information

**Nature of Hazard and Toxicity Information:**

<table>
<thead>
<tr>
<th>Water (Aqua)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butylene Glycol</strong></td>
</tr>
<tr>
<td>Oral rat LD50: 1525 mg kg$^{-1}$; oral rabbit LD50: 2531 mg kg$^{-1}$</td>
</tr>
<tr>
<td><strong>Glycerin</strong></td>
</tr>
<tr>
<td>Oral rat LD50: 12.6 g kg$^{-1}$</td>
</tr>
<tr>
<td><strong>Carbomer</strong></td>
</tr>
<tr>
<td><strong>PEG-8</strong></td>
</tr>
<tr>
<td><strong>Caprylyl Glycol</strong></td>
</tr>
<tr>
<td><strong>Carrageenan (Chondrus Crispus)</strong></td>
</tr>
</tbody>
</table>
Phenoxyethanol
Oral mouse LD50: 933 mg kg\textsuperscript{-1}; Rat dermal toxicity LD50: 14,422 mg kg\textsuperscript{-1}

Disodium EDTA
Oral rat LD50: 2,000 mg kg\textsuperscript{-1}

Methylparaben

Processed Skin Proteins (PSP™)
Well tolerated on skin (no contact allergen and no contact irritant up to 0.5% in petrolatum), not cytotoxic for human dermal fibroblasts (up to 10%)

Butylparaben

Sodium Hyaluronate
Oral mouse LD50: >2.4 g kg\textsuperscript{-1}; oral rabbit LD50: >1 g kg\textsuperscript{-1}; oral rat LD50: >800 mg kg\textsuperscript{-1}

Ethylparaben

Sodium Polyacrylate

Isobutylparaben

Propylparaben

Section 12 – Ecological Information

Nature of Hazard and Ecological Information:

Clean Air Act: This product does not contain any hazardous air pollutants. This product does not contain any Class 1 Ozone depletors. This product does not contain any Class 2 Ozone depletors.

Section 13 – Disposal Recommendations

State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 – Transport Information

Non-hazardous. Not regulated.

Section 15 – Regulatory Information

U.S. Federal Regulations: The following information may be useful in complying with
various state and federal laws and regulations under various environmental statutes:

i) **Threshold Planning Quantity (TPQ),** EPA Regulation 40 CFR 355 (SARA sections 301–304). No TPQ for product or any constituents greater than 1% or 0.1% (carcinogen).

ii) **Toxic Chemical Release Reporting,** EPA Regulation 40 CFR 372 (SARA section 313). No toxic chemical is present greater than 1% or 0.1% (carcinogen).

iii) **Hazardous Chemical Reporting,** EPA Regulation 40 CFR 370 (SARA sections 311-312).

### Section 16 – Other Information

Date Issued: August 01, 2006  
Supersedes Date: March 16, 2011  
MSDS ID# 004, BIO-GEL Bio-restorative Hydrogel

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*End of Material Safety Data Sheet*