

## 1. Product and Company Identification

**Material name** Gibson Assembly® Ultra Kit & Master Mixes  
**Version #** 01D  
**Issue date** 24-February-2015  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product code** GA1200  
**Product use** Research use only.  
**Manufacturer**  
**Manufacturer/Supplier Address** Synthetic Genomics Inc.  
11099 North Torrey Pines Road,  
La Jolla CA United States 92037  
**Telephone Number** (855) 474-4362  
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**Contact person** Customer Service  
**Emergency telephone number** (858) 754-2900

## 2. Hazards Identification

**Emergency overview** WARNING  
Causes skin, eye and respiratory tract irritation.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Inhalation. Ingestion. Skin contact. Eye contact.  
**Eyes** Causes eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** May cause discomfort if swallowed.  
**Target organs** Eyes. Skin. Respiratory tract.  
**Chronic effects** Conjunctiva.  
**Signs and symptoms** Irritant effects.  
**Potential environmental effects** May cause long-term adverse effects in the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Poly(oxy-1,2-ethanediyl) ethoxylated	25322-68-3	7-12
Tris-(hydroxymethyl)aminomethane	77-86-1	3-5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

**First aid procedures**  
**Inhalation** Move to fresh air. Get medical attention, if needed.  
**Skin contact** Wash the skin immediately with soap and water. Get medical attention if irritation develops and persists.  
**Eye contact** Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible).

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Not flammable by OSHA criteria. Not combustible by OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Hazardous combustion products</b>	Carbon oxides.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods for containment</b>	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	<p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Should not be released into the environment.</p> <p>Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.</p>

## 7. Handling and Storage

<b>Handling</b>	Provide adequate ventilation. Avoid inhalation of vapors and contact with skin and eyes. Wear appropriate personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices.
<b>Storage</b>	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS).

## 8. Exposure Controls / Personal Protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Engineering controls</b>	General ventilation normally adequate.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	If contact is likely, safety glasses with side shields are recommended. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.
<b>Skin protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection**

Gloves are recommended for prolonged use. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical & Chemical Properties****Appearance****Physical state**

Liquid.

**Form**

Liquid.

**Color**

Colorless.

**Odor**

Slight.

**Odor threshold**

Not applicable.

**pH**

7 - 9

**Vapor pressure**

Not applicable.

**Vapor density**

Not applicable.

**Boiling point**

Not applicable.

**Melting point/Freezing point**

Not applicable.

**Solubility (water)**

100 % (25 °C) Completely soluble in water.

**Specific gravity**

Not applicable.

**Flash point**

Not applicable.

**Flammability limits in air, upper, % by volume**

Not applicable.

**Flammability limits in air, lower, % by volume**

Not applicable.

**Auto-ignition temperature**

Not applicable.

**VOC**

Not applicable.

**Evaporation rate**

Not applicable.

**Viscosity**

Not applicable.

**Partition coefficient (n-octanol/water)**

Not applicable.

**Bulk density**

Not applicable.

**Other data****Decomposition temperature**

Not applicable.

**Flammability (solid, gas)**

Not applicable.

**10. Chemical Stability & Reactivity Information****Reactivity**

The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability**

Material is stable under normal conditions.

**Conditions to avoid**

Contact with incompatible materials.

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

No hazardous decomposition products are known.

**Possibility of hazardous reactions**

No dangerous reaction known under conditions of normal use.

**11. Toxicological Information****Toxicological data****Components****Species****Test Results**

Tris-(hydroxymethyl)aminomethane (CAS 77-86-1)

**Acute****Oral****LD50**

Rat

5900 mg/kg

<b>Sensitization</b>	No data available.
<b>Acute effects</b>	May cause discomfort if swallowed.
<b>Local effects</b>	Causes skin, eye and respiratory tract irritation.
<b>Chronic effects</b>	None known.
<b>Carcinogenicity</b>	No data available for this product.
<b>Epidemiology</b>	No epidemiological data is available for this product.
<b>Mutagenicity</b>	No data available.
<b>Reproductive effects</b>	No data available.
<b>Teratogenicity</b>	No data available.
<b>Symptoms and target organs</b>	Irritant effects.

## 12. Ecological Information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Aquatic toxicity</b>	Not classified.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation / accumulation</b>	
<b>Bioaccumulative potential</b>	
<b>Octanol/water partition coefficient log Kow</b>	
Tris-(hydroxymethyl)aminomethane (CAS 77-86-1)	-2.31 (20°C)
<b>Mobility in environmental media</b>	The product is water soluble and may spread in water systems.

## 13. Disposal Considerations

<b>Waste codes</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.

## 15. Regulatory Information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number</b>	
Not listed.	
<b>Drug Enforcement Administration (DEA). List 1 &amp; 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))</b>	
Not regulated.	
<b>DEA Exempt Chemical Mixtures Code Number</b>	
Not regulated.	

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA (Superfund) reportable quantity, lbs**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

Yes

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**US state regulations**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**16. Other Information****Further information**

HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**

Health: 2  
Flammability: 1  
Physical hazard: 0

**NFPA ratings****Disclaimer**

Synthetic Genomics Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.