Revision Date: 12.16.21 # Safety Data Sheet **Version 1 Revision 2**

1. Identification of the Substance or Mixture/Preparation & of the Company/Undertaking

Product identifiers:

Product Name: SM2

Part Number: 100010

CAS-No's: 1310-58-3; 60-00-4

Recommended use of the chemical and restrictions on use:

Recommended use: Reagent

Details of the supplier of the safety data sheet:

Manufacturer address:	Company phone number:	E-mail address:
BioSkryb Genomics, Inc. 2810 Meridian Parkway, Suite 110 Durham, NC 27713 USA	**+1 919-370-0841**	**info@bioskryb.com**

Emergency telephone number:

24 Hour Emergency Phone Number: 1-800-535-5053

2. Hazards Identification

Classification of the substance or mixture: Mixture

Signal Word: Danger

Pictograms:

2.1: CAS NO: 1310-58-3 and 2.2 : CAS NO: 60-00-4:

Corrosive to metals (Category 1), H290
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
Short-term (acute) aquatic hazard (Category 3), H402
FGHS Label elements, including precautionary statements
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
Avoid breathing vapor or mist.
Avoid contact with eyes, skin, and clothing.
Use only with adequate ventilation.
Keep container tightly closed and sealed until ready for use.
Harmful to aquatic life.
Precautionary statement(s):
Keep only in original container.
Do not eat, drink, or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER/doctor. Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off all contaminated clothing immediately. Rinse skin with water/shower. Wash contaminated clothing before reuse. Wash skin thoroughly after handling.
Remove person to fresh air. Immediately call a POISON CENTER/doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Absorb spillage to prevent material damage. Avoid release to the environment.
Store locked up. Store in corrosive resistant container with a resistant inner liner.
Dispose of contents/ container to an approved waste disposal plant.
Hazards not otherwise classified (HNOC) or not covered by GHS – none

Potential acute health effects:

Inhalation: Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion: Causes burns by all exposure routes. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Medical conditions aggravated by overexposure: Unknown

3. Composition/Information on Ingredients

Chemical characterization: Mixture

Component	CAS NO	Weight %
Potassium hydroxide	1310-58-3	<50*
EDTA	60-00-4	<20*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. First Aid Measures

Description of first aid measures:

4.1: CAS NO: 1310-58-3:
Eye contact: Immediate medical attention is required. Rinse immediately with plenty of water - also under the eyelids - for at least 15 minutes.
Skin contact: Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation: Move to fresh air. Do not use mouth-to-mouth method if substance ingested or inhaled; if not breathing, give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Most important symptoms and effects: Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.
Ingestion causes severe swelling, severe damage the delicate tissue and danger of perforation
Notes to physician: Treat symptomatically

4.2 CAS NO: 60-00-4:
Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately**.**
Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately**.**
Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Firefighting Measures

Extinguishing media: Use an extinguishing agent suitable for the surrounding area.
Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special hazards arising from the substance or mixture: Potassium oxides; carbon dioxide, carbon monoxide. Nitrogen oxides. Keep product and empty container away from heat and sources of ignition.
Advice for firefighters: Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Further information: No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Evacuate surrounding areas. Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of vapors. Do not use metal tools or equipment.
Environmental precautions: Prevent entry into waterways, sewers, basements, or confined areas. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal. Dilute with water and mop up if water-soluble. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Precautions for safe handling: Do not ingest. Avoid contact with skin, eyes, and clothing. Handle in accordance with good industrial hygiene and safety practice. Always wear recommended personal protective equipment. Keep container tightly closed when not in use. Do not reuse container.
Conditions for safe storage: Store between the following temperatures: -15 to -25°C (5 to 13°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Specific end use(s): Apart from the uses mentioned in section 1, no other specific uses are stipulated.
For research use only. Not for use in diagnostic procedures.

8. Exposure Controls/Personal Protection

Engineering Controls: Use under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Exposure controls: Wear proper personal protective equipment.
Eye/face protection: Wear safety glasses with side shields (or goggles).
Skin and body protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information. Wash contaminated clothing before reusing.
Respiratory protection: No protective equipment is needed under normal use conditions.
Control of environmental exposure: Handle in accordance with good industrial hygiene and safety practices.

9. Physical and Chemical Properties

Information on basic physical and chemical properties:

a) **Appearance Form:** Clear liquid
b) **Odor:** Odorless
c) **Odor Threshold:** No data available
d) **pH:** 12.7 - 13.1
e) **Melting point/freezing point:** No data available
f) **Initial boiling point and boiling range:** No data available
g) **Flash point:** No data available
h) **Evaporation rate:** No data available
i) **Flammability (solid, gas):** No data available
j) **Upper/lower flammability or explosive limits:** No data available
k) **Vapor pressure:** No data available
l) **Vapor density:** No data available
m) **Relative density:** No data available
n) **Water solubility:** No data available
o) **Partition coefficient n-octanol/water:** No data available
p) **Auto-ignition temperature:** No data available
q) **Decomposition temperature:** No data available
r) **Viscosity:** No data available
s) **Explosive properties:** No data available
t) **Oxidizing properties:** No data available

10. Stability and Reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: No data available
Conditions to avoid: No data available
Incompatible materials: Light metals, alkali metals, metals, organic materials, copper
Vigorous reaction with: halogens, nitro compounds, magnesium, asides, contact with aluminum, tin, and zinc liberates hydrogen gas.
Hazardous decomposition products: Potassium oxides
Other decomposition products: No data available
Hazardous decomposition products formed under fire conditions: Hazardous decomposition products formed under fire conditions: potassium oxides, carbon oxides, nitrogen oxides
In the event of fire: See section 5

11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Test Route: LD50 Oral for Cas#60-00-4; Species: Mouse; Result: 30 mg/kg
Dermal: No data available

Skin corrosion/irritation: No data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
Reproductive toxicity: No data available
Specific target organ toxicity - single exposure: No data available
Specific target organ toxicity - repeated exposure: No data available
Aspiration hazard: No data available
Additional Information: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Symptoms may include spasm, inflammation and edema of the larynx; spasm, inflammation and edema of the bronchi; pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, and nausea.
Handle in accordance with good industrial hygiene and safety practices.

12. Ecological Information

Toxicity: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety
assessment not required/not conducted
Other adverse effects: Discharge into the environment must be avoided.

13. Disposal Considerations

Waste treatment methods:

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging: Dispose of as unused product.
Disposal of wastes: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. Transport Information

DOT (US): Classified under HAZMAT Class 8
IMDG: Classified under HAZMAT Class 8
IATA: Classified under HAZMAT Class 8

15. Regulatory information

SARA 302 Components: This material does not contain any components with a section 302 EHS TPQ.
SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section
313.
SARA 311/312 Hazards: Acute health hazard

16. Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Users must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

BioSkryb Genomics, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.