

MSDS COVER SHEET

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| GM 6031 | <i>OneMinute</i>[®] Advance Western Blot Stripping Buffer Components: GM6001, <i>OneMinute</i> [®] Western Blot Stripping Buffer GM6021, Buffer A, 25 x Supplement GM6021, Buffer B, <i>OneMinute</i> [®] WB Stripping Enhancing Buffer |
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MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: **OneMinute[®] Western Blot Stripping Buffer**

Catalog Numbers: **GM6001, GM6002**

Company Name & Address:

GM Biosciences, Inc
5350 Partners Ct., Suite C
Frederick, MD 21703
USA
Tel: 240-595-9177
Fax: 301-378-2862

Use of the substance/preparation: Refer to the instruction for proper and intended use. Otherwise, contact supplier for specific applications

Section 2. Composition, Information on Ingredients

Description

Water solutions of components listed.
Volume of each product package varies: 20-500 ml.

| Components in Water Reagent | Concentration, % |
|-----------------------------|------------------|
| Component 1 | 0.01-2 |
| Component 2 | 0.01-5 |
| Component 3 | 0.01-5 |

Section 3. Hazards Identification

Emergency Overview

Danger!
CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
RESPIRATORY TRACT, SKIN, EYES.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
Do not ingest. Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Primary Routes of Entry

Skin or Eye contact from splashes. Inhalation of the vapor. Ingestion.
Eyes contact Corrosive to eyes.
Skin contact Harmful in contact with skin. Corrosive to the skin.
Inhalation Corrosive to the respiratory system.
Ingestion Harmful if swallowed. May cause burns to mouth, throat and gastrointestinal tract.

Medical Condition Aggravated by Overexposures

Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Over Exposure Signs/Symptoms Not available.

Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Inhalation Exposure

If inhaled, remove to fresh air. If breathing becomes difficult, Get medical attention.

Ingestion Exposure

If swallowed, wash out mouth with water provided person is conscious. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Skin Exposure

In case of skin contact, immediately flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye Exposure

In case of contact with eyes, immediately flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

Section 5. Fire Fighting Measures

Flash Points N/A

Autoignition Temp N/A

Flammability N/A

Extinguishing Media

Suitable: For small (incipient) fires, use media such as foam, dry chemical, or carbon dioxide. For large fires, use media such as foam, dry chemical, carbon dioxide or water.

Fire Fighting

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Methods of fire Fighting: for small (incipient) fire flammable liquid fires. For large fires, fixed fire suppression system, such as a sprinkler system, should be capable of extinguishing a flammable liquid fire.

Section 6. Accidental Release Measures

Personal Precautions

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Environmental Precautions and Clean-up Methods

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material and place in closed containers for disposal. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralized the residue with a dilute solution of sodium carbonate. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Small Spill and Leak

Dilute with water and mop up or absorb with an inert dry material and place in an appropriate waste disposal container. Neutralized the residue with a dilute solution of sodium carbonate if necessary. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7. Handling and Storage

Handling

Do not get in eyes, on skin, on clothing. Do not breathe vapor. Wash thoroughly after handling.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area.

Intended Use

Refer to the instruction for proper and intended use. Otherwise, contact supplier for specific applications.

Special requirements

May develop pressure. Open carefully. Use original container.

Section 8. Exposure Controls/Personal Protection

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Safety shower and eye bath.

General Hygiene Measures

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Personal Protective Equipment

Eyes Splash goggles.

Body Lab coat.

Hands Gloves.

Respiratory Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

Feet Boots.

Section 9. Physical and Chemical Properties

Physical state: Liquid.

Color: Colorless.

Odor: N/A.

Taste: N/A.

pH: Acidic.

Boiling Point: N/A.

Freezing Point: May start to solidify at 0°C (32°F) based on data for water.

Critical Temp: N/A.

Vapor pressure: N/A.

Vapor density: N/A.

Evaporation Rate: N/A.

Viscosity: N/A.

Dispersion properties: See solubility in water.

Solubility: N/A.

Miscellaneous Data: N/A.

Surface Tension: N/A.

Section 10. Stability and Reactivity

Stability and reactivity: Stable, under normal handling and storage conditions.

Materials to avoid: Strong oxidizing agents, Strong acids and organic materials.

Hazardous polymerization: Will not occur.

Hazardous Decomposition Products: No data available.

Section 11. Toxicological Information

Route of Exposure

Skin contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye contact: Causes burns.

Inhalation: may be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Prolonged contact can cause severe irritation or even burns. Symptoms of exposure may include burning sensation, lung irritation, chest pain, oedema (which may be fatal), coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Section 12. Ecological Information

No Data Available.

Section 13. Disposal Considerations

Substance disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Contact a licensed professional waste disposal service to dispose of this material.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport Information

Contact the supplier for all information regarding the proper transportation method for this material.

Section 15. Regulatory Information

EU directive classification

Symbol of Danger: C

Indication of Danger: Corrosive.

R: 34-37

Risk Statements: Causes burns. Irritating to respiratory system.

S: 26-37/39-45

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text

Indication of Danger: Toxic.

Risk Statements: Toxic by inhalation. Causes burns. Irritating to respiratory system.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

United States Regulatory information

SARA Listed: No

TSCA Inventory Item: Yes

Canada regulatory information

WHMIS classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16. Regulatory Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: Buffer A, 25 x Supplement

Catalog Numbers: GM6021

Company Name & Address:

GM Biosciences, Inc
4539 Metropolitan CT.
Frederick, MD 21704
USA
Tel.: 240-595-9177
Fax.: 301-378-2862

Use of the substance/preparation: Refer to the instruction for proper and intended use. Otherwise, contact supplier for specific applications

Section 2. Composition, Information on Ingredients

Description

Water solutions of components listed.
Volume of each product package varies: 2-50 ml.

Components in Water Reagent

Concentration, %

| | |
|-------------|---------|
| Component 1 | 0.01-2 |
| Component 2 | 0.01-5 |
| Component 3 | 0.01-15 |

Section 3. Hazards Identification

Risk advice to man and the environment:

Causes burns

The toxic details of this product have not been thoroughly investigated.

Target Organs: Respiratory system, eyes and skin.

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract.

Corrosive to skin. Extent of damage to skin depends upon length of exposure.

Causes burns to mouth, throat, and stomach. Could be fatal if swallowed.

Eye contact can cause corneal damage or blindness

Corrosive to lungs. Causes irritation to gastro-intestinal or respiratory tract.

Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Inhalation Exposure

If inhaled, remove to fresh air. If breathing becomes difficult, Get medical attention.

Ingestion Exposure

If swallowed, wash out mouth with water provided person is conscious. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Skin Exposure

In case of skin contact, immediately flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye Exposure

In case of contact with eyes, immediately flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

Section 5. Fire Fighting Measures

Flash Points N/A

Autoignition Temp N/A

Flammability N/A

Extinguishing Media

Suitable: For small (incipient) fires, use media such as foam, dry chemical, or carbon dioxide. For large fires, use media such as foam, dry chemical, carbon dioxide or water.

Fire Fighting

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Methods of fire Fighting: for small (incipient) fire flammable liquid fires. For large fires, fixed fire suppression system, such as a sprinkler system, should be capable of extinguishing a flammable liquid fire.

During a fire, irritating and highly toxic gasses may occur.

Section 6. Accidental Release Measures

Personal Precautions

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Environmental Precautions and Clean-up Methods

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material and place in closed containers for disposal. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Small Spill and Leak

Dilute with water and mop up or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7. Handling and Storage

Handling

Do not get in eyes, on skin, on clothing. Do not breathe vapor. Wash thoroughly after handling.

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 4C. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Intended Use

Refer to the instruction for proper and intended use. Otherwise, contact supplier for specific applications.

Special requirements

May develop pressure. Open carefully. Use original container.

Section 8. Exposure Controls/Personal Protection

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Safety shower and eye bath.

Personal Protective Equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

| | |
|-------------------------------|--------------------------|
| Physical state: | Liquid. |
| Color: | Colorless. |
| Odor: | N/A. |
| Taste: | N/A. |
| pH: | Acidic. |
| Boiling Point: | N/A |
| Freezing Point: | N/A |
| Critical Temp: | N/A |
| Vapor pressure: | N/A |
| Vapor density: | N/A. |
| Evaporation Rate: | N/A. |
| Viscosity: | N/A. |
| Dispersion properties: | See solubility in water. |
| Solubility: | N/A. |
| Miscellaneous Data: | N/A. |
| Surface Tension: | N/A. |

Section 10. Stability and Reactivity

Stability and reactivity: Stable, under recommended handling and storage conditions.

Materials to avoid: Strong oxidizing agents.

Hazardous polymerization: Will not occur.

Hazardous Decomposition Products: Toxic fumes of carbon monoxide, carbon dioxide, halogenated compounds, and phosphates.

Section 11. Toxicological Information

Route of Exposure

Skin contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye contact: Causes burns.

Inhalation: may be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Prolonged contact can cause severe irritation or even burns. Symptoms of exposure may include burning sensation, lung irritation, chest pain, oedema (which may be fatal), coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

Section 12. Ecological Information

No Data Available.

Section 13. Disposal Considerations

Substance disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Contact a licensed professional waste disposal service to dispose of this material.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport Information

Contact the supplier for all information regarding the proper transportation method for this material.

Section 15. Regulatory Information

European/International Regulations

R20/21/22R34R37: Harmful if inhaled, ingested, or in contact with skin. Causes burns. Irritating to the respiratory system

S26S27S36/37/39: If contact is made with eyes, immediately rinse with large amounts of water and seek medical consultation.

Hazard Symbol: C

Section 16. Regulatory Information

Disclaimer

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Notice to reader

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MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer B, OneMinute® WB Stripping Enhancing Buffer

Catalog Numbers: GM6021

Company Name & Address:

GM Biosciences, Inc
4539 Metropolitan CT.
Frederick, MD 21704
USA
Tel.: 240-595-9177
Fax.: 301-378-2862

Use of the substance/preparation: Refer to the instruction for proper and intended use. Otherwise, contact supplier for specific applications

SECTION 2. COMPOSITION, INFORMATION ON INGREDIENTS

DESCRIPTION

Water solutions of components listed.
Volume of each product package varies: 10-500 ml.

| COMPONENTS IN WATER REAGENT | CONCENTRATION, % |
|-----------------------------|------------------|
| Component 1 | 0.01-1 |
| Component 2 | 0.01-8 |

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation.

HMIS RATING

HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0

SECTION 4. FIRST AID MEASURES

NOTICE TO READER Get immediate medical attention.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, Get medical attention.

INGESTION EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

SKIN EXPOSURE

In case of skin contact, immediately flush with copious amounts of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

EYE EXPOSURE

In case of contact with eyes, immediately flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINTS N/A

AUTOIGNITION TEMP N/A

FLAMMABILITY N/A

EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as foam, dry chemical, or carbon dioxide. For large fires, use media such as foam, dry chemical, carbon dioxide or water.

FIRE FIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

HANDLING

Do not get in eyes, on skin, on clothing. Avoid inhalation. Avoid prolonged or repeated exposure.

STORAGE

Keep container tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Protective gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Color: Colorless.
Odor: N/A.
Taste: N/A.
pH: N/A
Boiling Point: N/A
Freezing Point: N/A
Critical Temp: N/A
Vapor pressure: N/A
Vapor density: N/A.
Evaporation Rate: N/A.
Viscosity: N/A

Dispersion properties: N/A
Solubility: N/A.
Miscellaneous Data: N/A.
Surface Tension: N/A.

N/A = not available

SECTION 10. STABILITY AND REACTIVITY

STABILITY AND REACTIVITY: Stable, under recommended handling and storage conditions.

MATERIALS TO AVOID: Potassium, Acid anhydrides.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE

Skin contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye contact: May cause eye irritation
Inhalation: may be harmful if inhales.
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma.

SECTION 12. ECOLOGICAL INFORMATION

No Data Available.

SECTION 13. DISPOSAL CONSIDERATIONS

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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 14. TRANSPORT INFORMATION

Contact the supplier for all information regarding the proper transportation method for this material.

SECTION 15. REGULATORY INFORMATION

EU ADDITIONAL CLASSIFICATION

S: 24/25

Safety Statements: Avoid contact with skin and eyes.

US CLASSIFICATION AND LABEL TEXT

US Statements: Caution: Avoid contact and inhalation.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

SECTION 16. REGULATORY INFORMATION

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