**Exymes Group**
**Alum House**
**Alum Chine Road**
**Westbourne**
**BH4 8DT**
**UK**

# Safety Data Sheet

## An Exymes Product

### SECTION 1: PRODUCT IDENTIFICATION and COMPANY IDENTIFICATION

| | |
|---|---|
| **Product Name** | ***prep*Bacteria kit** |
| **Generic Name** | NA |
| **Synonyms** | NA |
| **Product Description** | Genomic DNA extraction kit. For research use only |
| **REACH Registration number** | A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration. |
| **CAS #** | NA – mixture |
| **Date of Revision** | April 2025 |
| **Company Support** | Email: info@exymesplc.com |

| | |
|---|---|
| **Supplier Details in NZ** | Exymes NZ Ltd., Subsidiary of Exymes PLC<br>201 Princes Street, Level 1, Stanton Building, Dunedin, New Zealand<br>Emergency telephone: +64 0800-764-766 (National Poison Centre) |

### SECTION 2: HAZARD IDENTIFICATION

**Potential Health Effects:**
Australia: NOHSC 2011 National Code of Practice: This material is not considered hazardous according to safe work Australia
New Zealand: This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017
EPA Approval No: Reagent Kits Group Standard 2017 -
HSR002647 Signal Word: **DANGER Pictograms:**


Irritant


Chronic


Corrosive

Kit includes four separate clear liquids and one lyophilized powder as follows:

| **PrepX: HSNO Classification** | **Hazard Code** | **Hazard Statement** | **GHS Category** |
|---|---|---|---|
| 6.5A | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. | Resp. Sens. 1 |
| 6.5B | H317 | May cause an allergic skin reaction. | Skin Sens. 1 |

| **Green+ Buffer: HSNO Classification** | **Hazard Code** | **Hazard Statement** | **GHS Category** |
|---|---|---|---|
| 9.3C | H433 | Harmful to terrestrial vertebrates. | - |

| **Wash+ Buffer:**<br>**HSNO Classification** | **Hazard Code** | **Hazard Statement** | **GHS Category** |
|---|---|---|---|
| 8.2B | H314 | Corrosive | Corrosive 1B |

| **Lysozyme:**<br>***Enhancer* Buffer:**<br>**HSNO Classification** | **Hazard Code** | **Hazard Statement** | **GHS Category** |
|---|---|---|---|
| Non hazardous | | | |

## CONSOLIDATED PREVENTION AND RESPONSE STATEMENT

| Prevention Code | Prevention Statement |
|---|---|
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P260 | Do not breathe fumes, vapours or spray. |
| P264 | Wash hands thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective clothing as detailed in Section 8. |
| P285 | In case of inadequate ventilation wear respiratory protection. |

| Response code | Response Statement |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P363 | Wash contaminated clothing before reuse. |
| P301 + P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303 + P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304 + P341 | IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P342 + P311 | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. |

| Storage code | Storage Statement |
|---|---|
| P405 | Store locked up. |

| Disposal code | Disposal Statement |
|---|---|
| P501 | |

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Product Kit Name | Catalog Codes | Reactions per kit | Total Solution volume per kit (rounded) | Description of kit components |
|---|---|---|---|---|
| ***prep* Bacteria** | PRBA0100<br>PRBA0500<br>PRBA1000 | 100<br>500<br>1000 | 9 ml<br>37 ml<br>76 ml | .....***prep***X<br>.....GREEN+ Buffer<br>.....WASH+ Buffer<br>..... Lysozyme<br>.....***Enhancer*** Buffer |

## SECTION 3B: HAZARDOUS COMPONENTS

| Kit Component | Contains | CAS # | Weight % |
|---|---|---|---|
| ***prep***X | EA1 Enzyme – Proteinase<br>Glycerol | Proprietary<br>56-81-5 | 0.1-0.2<br>18-23 |
| ***Lysozyme*** | Contains less than 15mg of highly purified lyophilized powder derived from egg albumin | | |
| GREEN+ Buffer | Potassium Chloride | 7447-40-7 | 5-10% |
| WASH+ Buffer | Guanidine thiocyanate | 593-84-0 | <5% |

## SECTION 3C: NON HAZARDOUS COMPONENTS

| | | | |
|---|---|---|---|
| ***Enhancer*** Buffer | Trade secret- Contains nonhazardous components. | | |

**Non-hazardous components may or may not be listed. Carcinogens are listed when present at 0.1% or more; components which are otherwise hazardous according to OSHA are listed when present at 1.0% or more. This is not intended to be complete compositional disclosure. See Section 15 for applicable states right to know and other regulatory information.**

**Some reagents are Trade Secrets as permitted under USA: 29 CFR 1910.1200, Canadian CPR Sections 12 and 19, European Union Directive 1999/45/EC. All such reagents are highly purified enzymes from non-pathogenic organisms. These reagents are at concentrations of < 1%.**

## SECTION 4: FIRST AID MEASURES

| | |
|---|---|
| **Inhalation** | Remove to fresh air. Not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention |
| **Ingestion** | Rinse mouth. Do NOT induce vomiting. Drink several glasses of water or milk. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician. |
| **Skin** | Immediately flush skin with plenty of water for at least 15 minutes. Remove/Take off immediately all contaminated clothing. Get medical attention if irritation develops. |
| **Eyes** | Remove contact lenses immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately. |
| **Most important symptoms and effects, both acute and delayed** | Ingestion: Not applicable<br>Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>Skin: Causes skin burns. May cause an allergic skin reaction.<br>Eye: Causes serious eye damage |

## SECTION 5: FIRE FIGHTING MEASURES

| | |
|---|---|
| **Fire** | Flash point: Not flammable |
| **Extinguishing Media** | Use appropriate media for the surrounding fire |
| **Explosion** | Not considered an explosion hazard |
| **Special Precautions** | Use appropriate media for the surrounding fire |
| **Hazchem Code** | 2X |

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Do not allow to enter waterways.

Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Wash contaminated area with plenty of water. Dispose as per Section 15.

## SECTION 7: HANDLING AND STORAGE

Read label before use. Do not breath vapours or fumes. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective clothing as detailed in Section 8.
In case of inadequate ventilation wear respiratory protection.
Keep out of reach of children. Keep in a tightly closed container. This product can be stored at 4°C. Once opened store at -20°C. Protect material from long-term exposure to light. Short periods of exposure to light are acceptable. Keep away from incompatible materials listed in Section 10.

## SECTION 8: EXPOSURE CONTROL/ PERSONAL PROTECTION

| | |
|---|---|
| **Exposure Guidelines** | WORKPLACE EXPOSURE STANDARDS (provided for guidance only)<br><br>**Substance** — **TWA** ppm mg/m³ — **STEL** ppm mg/m³<br>Glycerin (mist) [56-81-5] — TWA: - 10 — STEL: - -<br><br>Workplace Exposure Standard – Time Weighted Average (WES-TWA).The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION. |
| **Skin and body Protection** |  <br>Lightweight protective clothing. Wear protective latex gloves and handle in accordance with good laboratory safety practice |
| **Eye Contact** |  <br>Safety glasses with side shields in accordance with good laboratory safety practice |
| **Inhalation** | In case of insufficient ventilation wear suitable respiratory equipment. |
| **Engineering Controls** | Ensure adequate ventilation. |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | **All buffer solutions** | **Lyophilized Enzymes** | **Enzyme solution** |
|---|---|---|---|
| **Appearance** | Liquid | Powder | Liquid |
| **Colour** | Clear | White | Clear |
| **Odour** | Not available | Not available | Not available |
| **Odour Threshold** | Not available | Not available | Not available |
| **pH** | 8.3 | Not available | 7.0 |
| **Boiling Point** | > 100°C | Not available | > 100°C |
| **Melting Point** | < 0°C | Not available | < 0°C |
| **Freezing Point** | Not available | Not available | Not available |
| **Flash Point** | Not available | Not available | Not available |
| **Flammability** | Not available | Not available | Not available |
| **Upper and Lower Explosive Limits** | Not available | Not available | Not available |
| **Vapour Pressure** | Not available | Not available | Not available |
| **Vapour Density** | Not available | Not available | Not available |
| **Specific Gravity** | About 1.0 | Not available | About 1.0 |
| **Water Solubility** | Complete | Complete | Complete |
| **Partition Coefficient:** | Not available | Not available | Not available |
| **Auto-ignition Temperature** | Not available | Not available | Not available |
| **Decomposition Temperature** | Not available | Not available | Not available |
| **Kinematic Viscosity** | Not available | Not available | Not available |
| **Particle Characteristics** | Not available | Not available | Not available |

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **Chemical Stability** | This product is stable in closed containers at room temperature. |
| **Hazardous Decomposition Products** | Carbon oxides (CO, $CO_2$), nitrogen oxides (NO, $NO_2$, $N_2O$), hydrogen chloride |
| **Incompatibilities** | Strong oxidizers, heat |
| **Conditions to Avoid** | Incompatible materials, combustible materials. |

## SECTION 11: TOXICOLOGICAL INFORMATION

**Acute Effects:**

| | |
|---|---|
| **Swallowed** | Not applicable. |
| **Dermal** | Not applicable. |
| **Inhalation** | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| **Eye** | Not applicable. |
| **Skin** | Causes skin burns and eye damage. |

**Chronic Effects:**

| | |
|---|---|
| **Carcinogenicity** | Not applicable |
| **Reproductive Toxicity** | Not applicable |
| **Germ Cell Mutagenicity** | Not applicable |
| **Aspiration** | Not applicable |
| **STOT/SE** | Not applicable |
| **STOT/RE** | Not applicable |

## SECTION 12: ECOLOGICAL INFORMATION

**New Zealand:**
**HSNO Classes: 9.3 C**

| | |
|---|---|
| | Harmful to terrestrial vertebrates. |
| **Environmental Fate**: | This product is not expected to bioaccumulate. When released into water or air its expected half-life is 1- 10 days. |
| **Ecotoxicity**: | Dilute nature and small volumes of products makes any ecological effect highly unlikely. |

## SECTION 13: DISPOSAL CONSIDERATIONS

**As a waste, this material in its raw form IS NOT considered a HAZARDOUS WASTE under RCRA (29 CFR 261)**.
Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. 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

**New Zealand:**
**This product is classified as a Dangerous Good for transport in New Zealand; NZS 5433:2012**
**Road, Rail, Sea and Air Transport**

| | |
|---|---|
| **Proper Shipping Name**: | CORROSIVE LIQUID, N.O.S |
| **UN Number**: | 1760 |
| **Packing Group**: | II |
| Marine Pollutant: | No |
| Special Provisions: | If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG. |

## SECTION 15: REGULATORY INFORMATION

**New Zealand:**
**This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017**

EPA Approval Code: Reagent Kits Group Standard 2017 -HSR002647 HSNO Classification: 6.5A/B, 8.2B, 9.3C

| HSW (HS) Regulations 2017 and EPA Notices | Trigger Quantity |
|---|---|
| Certified Handler | Not required |
| Location Certificate | Not required |
| Tracking Trigger Quantities | Not required |
| Signage Trigger Quantities | 1000L/kg (9.3C) |
| Emergency Response Plan | 1000L/kg (6.5A) |
| Secondary Containment | 1000L/kg (6.5A) |
| Restriction of Use | Only use for the intended purpose. |

**TSCA Chemical Inventory**: All of the chemicals in this product are listed on the TSCA Inventory.
**TSCA Sec 4 Chemical Test Rule**: None of the chemicals in this product are under a Chemical Test Rule.
**TSCA Sec 8(d)**: None of the chemicals in this product are on the Health and Safety Reporting List.
**TSCA Sec 12(b) Notices of Export**: None of the chemicals in this product are on this list.
**TSCA Significant New Use Rule (SNUR)**: None of the chemicals in this product are on this list.
**SARA Sec 302 (EHS) TPQ**: None of the chemicals in this product have a TPQ.
**SARA Sec 302 (EHS) RQ**: None of the chemicals in this product have a RQ.
**SARA Sec 311/312**: Acute – NO; Chronic – NO; Fire – NO; Release of Pressure – NO; Reactivity – NO **SARA 313 List**: No materials in this product are reportable under Section 313 Title III and 40 CFR Part 372. **CERCLA Hazardous Substances and corresponding RQs**: N/A **RCRA**: None of the chemicals in this product are on this list.
**Clean Air Act**: **Hazardous Air Pollutants?** NO **Class 1 Ozone Depletors?** NO **Class 2 Ozone Depletors?** NO **Clean Water Act**: **Hazardous Substance?** NO **Priority Pollutant?** NO **Toxic Pollutant?** NO **Chemical Weapons Convention**: None of the chemicals in this product are on this list.
**Drug Enforcement Agency (DEA) CDTA**: None of the chemicals in this product are on this list.
**OSHA**: None of the chemicals in this product are considered Highly Hazardous by OSHA.
**State Right-to-Know Lists**: None of the materials in this product are found on the Right-to-Know lists of California, Florida, New Jersey, Pennsylvania, Massachusetts or Minnesota.

### Canada

All materials are listed on Canada's DSL List. One compound is listed on Canada's Ingredient Disclosure List, but below the ***de minimus*** concentration.
**WHMIS:**

Not WHMIS controlled.

This product has been classified in accordance with the hazard criteria of the ***Controlled Products Regulations*** and the MSDS contains all the information required by the ***Controlled Products Regulations***.

### European Union

| | |
|---|---|
| **Hazard Symbols:** | Xi |
| **Risk Phrases:** | R36/38- Irritating to eyes and skin |
| **Safety Phrases:** | S1/2 Keep locked up and out of the reach of children<br>S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>S 37/39 Wear suitable gloves and eye/face protection.<br>S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).<br>S46 If swallowed, seek medical advice immediately and show this container or label. |
| **REACH Registration Number:** | Not available |

## SECTION 16: OTHER INFORMATION

**Abbreviations and acronyms used:**

| | | | |
|---|---|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists | NA | not applicable, not available |
| ANSI | American National Standards Institute | NIOSH | National Institute for Occupational Safety and Health |
| atm | atmosphere (pressure unit) | ND | not determined |
| BOD | biological oxygen demand | NFPA | National Fire Prevention Association |
| CAS | Chemical Abstracts Service | NTP | National Toxicology Program |
| CC | closed cup | OC | open cup |
| CDTA | Chemical Drug and Trafficking Act | OSHA | Occupational Safety and Health Administration |
| COC | Cleveland Open Cup | Part | partition |
| COD | chemical oxygen demand | PEL | permissible exposure limits |
| coeff. | coefficient | ppb | parts per billion |
| CFR | Code of Federal Regulations | PPE | personal protective equipment |
| CPR | cardio-pulmonary resuscitation | ppm | parts per million |
| DEA | Drug Enforcement Agency | psi | pounds per square inch |
| DOT | Department of Transportation | RCRA | Resource Conservation and Recovery Act |
| FDA | Food and Drug Administration | RQ | Reportable quantity |
| IARC | Internat'l Agency for Research on Cancer | RTK | Right to Know |
| IDLH | immediate danger to life and health | SARA | Superfund Amendments and Reauthorization Act |
| kg | kilogram | TCC | Tagliabue Closed Cup |
| L | liter | TPQ | threshold planning quantity |
| LC50 | median lethal concentration | TQ | threshold quantity |
| LD50 | median lethal dose | TQ | threshold quantity |
| LEL | lower explosive limit | TSCA | Toxic Substances Control Act |
| mg | milligram | TWA | time-weighted average |
| mL | milliliter | WHMIS | Workplace Hazardous Materials Information System |

References:


1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017


This document was prepared in accordance with 29 CFR 1910.1200 and ANSI Z400.1-2004.



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