

Document: D-54070
Version: D-54070-003
Release date: Sept 5, 2011
Update date: Feb 27, 2014
Printed on: Sep 5, 2011

MATERIAL SAFETY DATA SHEET

Applies to part numbers: R-03019-B10, R-03019-B50

Section 1 Product and company identification

Product name: **Laemmlli 2X concentrate reducing protein sample loading buffer**
Supplier: Advansta Inc.
Address: 1505 Adams Dr., Ste. B1
Menlo Park, CA 94025
Phone: 650-325-1980

Section 2 Composition/Information on Ingredients

Ingredient	CAS #	%
Glycerol	56-81-5	10-30%
2-Mercaptoethanol	60-24-2	1-5%
Sodium dodecyl sulphate	151-21-3	1-5%
Bromophenol blue	115-39-9	<0.1%
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	1185-53-1	1-5%

Section 3 Hazards identification

EMERGENCY OVERVIEW:

OSHA HAZARDS

Target organ effect, toxic by inhalation, toxic by ingestion, highly toxic by skin absorption, corrosive

TARGET ORGANS

Kidney, lungs

GHS CLASSIFICATION:

Acute toxicity, oral (category 4)
Acute toxicity, inhalation (category 4)
Acute toxicity, dermal (category 3)
Skin irritation (category 2)
Serious eye damage (category 1)
Skin sensitization (category 1)
Acute aquatic toxicity (category 1)
Chronic aquatic toxicity (category 1)

HMIS RATING	
HEALTH	3
FLAMMABILITY	0
REACTIVITY	0

NFPA RATING	
HEALTH	3
FLAMMABILITY	0
REACTIVITY	0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

GENERAL ADVICE

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. Call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water. Take victim immediately to hospital. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Continue rinsing eyes during transport to the hospital. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Alcohol-resistant foam, dry chemical or carbon dioxide.
 Not suitable: Not known
 FIREFIGHTING Protective Equipment: Wear self-contained breathing apparatus for firefighting if necessary.
 HAZARDOUS COMBUSTION PRODUCTS Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides (NOx), sulphur oxides, hydrogen chloride gas, sodium oxides.

Section 6 - Accidental Release Measures

PERSONAL PRECAUTIONS Wear respirator protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.
 ENVIRONMENTAL PRECAUTIONS Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
 METHODS FOR CLEANING UP Absorb with an inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

HANDLING
 User Exposure: Avoid contact with skin and eyes. Avoid inhalation of vapors or mist.
 STORAGE
 Suitable: Keep tightly closed in a dry and well-ventilated place. Carefully reseal containers and keep upright to prevent leakage. Store at room temperature.

Section 8 - Exposure Controls / PPE

Components	CAS-No	Value	Control parameters	Basis
Glycerol	56-81-5	TWA	10 mg/m3	USA. OSHA – Table Z-1 Limits for air contaminants – 1910.1000
		TWA	5 mg/m3	USA. OSHA – Table Z-1 Limits for air contaminants – 1910.1000
		TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper respiratory tract irritation			
		TWA	15 mg/m3	USA. OSHA – Table Z-1 Limits for air contaminants
		TWA	5 mg/m3	USA. OSHA – Table Z-1 Limits for air contaminants
2-mercaptoethanol	60-24-2	TWA	0.2 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
Remarks	Skin			

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 Eye: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
 Skin and body: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

GENERAL HYGIENE MEASURES: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Section 9 - Physical and chemical properties

Appearance Physical State: Intense blue colored liquid.

Section 10 - Stability and Reactivity

STABILITY: Stable under recommended storage conditions.
 Materials to Avoid: Strong bases, acids, oxidizing agents, metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides (NOx), sulphur oxides, hydrogen chloride gas.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin:	May be fatal if absorbed through skin. Causes skin burns.
Skin Absorption:	May be harmful if absorbed through the skin.
Eye Contact:	Causes eye burns.
Inhalation:	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion:	Toxic if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE

Burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, weakness, nausea, unconsciousness.

Section 12 - Ecological Information

Very toxic to aquatic life.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION:

Observe all federal, state, and local environmental regulations.

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14 - Transport Information

DOT

Proper Shipping Name:	None
Non-Hazardous for Transport:	This substance is considered to be non-hazardous for transport.

IATA

Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (2-mercaptoethanol)
UN Number:	3082
Class	9
Packing Group	III

FURTHER INFORMATION

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Good > 5 L for liquids or > 5 kg for solids.

Section 15 - Regulatory Information

OSHA Hazards:	Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Highly toxic by skin absorption, Corrosive
SARA 311/312	Acute Health Hazard, Chronic Health Hazards
Massachusetts right to know components	Glycerol, 2-mercaptoethanol
Pennsylvania right to know components	Water, glycerol, 2-mercaptoethanol, sodium dodecyl sulphate
New Jersey right to know components	Water, glycerol, 2-mercaptoethanol, 2-amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride, sodium dodecyl sulphate
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16 Other information

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

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