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Material Safety Data Sheet

Section I - Product Identification

Product Name β -Galactosidase Staining Kit: X-GAL Reagent
Part# MIR 2600
Product Use Research Laboratory

Precautionary Labeling

We are unaware of any hazards with these products other than those associated with the individual components of each reagent listed below.

Section II - Components

<u>Component</u>	<u>CAS#</u>	<u>Hazard</u>	<u>Weight %</u>
Dimethyl Formamide	68-12-2	Toxic. May cause cancer. Harmful by inhalation, incontact with skin, and if swallowed. Irritating to eyes, respiratory system, and skin. Combustible. Keep away from heat and open flame. Readily absorbed through skin. Target organs: Liver; kidneys. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not breath vapor. In case of accident or if you feel unwell, seek medical advice immediately. Hygroscopic.	98.0
X-Gal	7240-90-6	Not applicable. Toxicity has not been studied.	2.0

Section III - Physical Data

Appearance	colorless liquid	Specific Gravity	0.944
Boiling Point	153°C	Solubility in Water	miscible
Melting Point	-61°C	Vapor Pressure	2.7 MM @ 20°C
Volatility (%)	100%		

Section IV - Fire and Explosion Hazard Data

Flash Point	57°C	UEL (%)	15.2
Autoignition Temp.	444°C	LEL (%)	2.2

Fire Extinguishing Media

Use dry chemical powder or carbon dioxide.

Special Fire-Fighting Procedures

Avoid breathing vapors. Use self-contained breathing apparatus. Prevent contact with skin and eyes. Firefighters should wear proper protective equipment.

Unusual Fire and Explosion Hazards

Combustible; Emits toxic fumes under fire conditions.

Section V - Health Hazard Data

PEL	10 ppm; 30 mg/m ³	Oral Rat LD₅₀	2800 mg/kg
		Carcinogenicity	Human limited evidence; Animal inadequate evidence

Section VI - Reactivity Data

Stability	Stable under normal temperatures and pressures.	Incompatibilities	Acid chlorides; Oxidizing agents; Chloroformates; Reducing agents; Halogens
Conditions to Avoid	Incompatible materials; Excess heat.	Decomposition Products	DMF: thermal decomposition may produce Carbon monoxide, Carbon dioxide and Nitrogen oxides. X-Gal: Carbon dioxide, Nitrogen oxides, Sulfur dioxide, Chlorine oxides, and Bromine oxides.

Section VII - Spills and Disposal
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Spills

Evacuate area. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Absorb with sand or vermiculite and place in closed container for disposal. Ventilate area and wash spill site after material pickup is complete.

Disposal

Dispose in accordance with all applicable federal, state, and local regulations. Combustible; May be burned in chemical incinerator equipped with an afterburner and scrubber.

Section VIII - Protective Equipment
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Ventilation

Use only in a chemical fume hood.

Respiratory Protection

Wear appropriate NIOSH/MSHA-approved respirator.

Eye/Skin Protection

Wear safety goggles, chemical resistant gloves and impervious protective clothing.

Section IX - Storage and Handling
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Storage Requirements

Keep container tightly closed. Store in a cool, dry place.

Section X - Transportation

AIR (ICAO)

Proper Shipping Name:	N, N-Dimethyl formamide
Hazard Class:	3
Packing Group:	III
Labels:	Flammable Liquid

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Material Safety Data Sheet

Section I - Product Identification

Product Name β-Galactosidase Staining Kit: Cell Fixative
Part# MIR 2600
Product Use Research Laboratory

Precautionary Labeling

Harmful in contact with skin.
 Toxic if swallowed.
 Irritating to eyes, respiratory system, and skin.
 May cause sensitization by skin contact.

Section II - Components

<u>Component</u>	<u>CAS#</u>	<u>Hazard</u>	<u>Weight %</u>
Water	7732-18-2	N/A	50.0
Glutaraldehyde	111-30-8	May cause allergic respiratory and skin reactions; Corrosive: has caused adverse reproductive and fetal effects in animals; Harmful if swallowed; Sensitiser; Causes eye, skin, digestive tract and respiratory tract burns. Target Organs: Liver; Respiratory System	50.0

Section III - Physical Data

Appearance	colorless liquid	Specific Gravity	0.7
Boiling Point	370.4 F	Solubility in Water	soluble
Melting Point	6.8 F	Vapor Pressure	17 mm Hg @ 20°C

Section IV - Fire and Explosion Hazard Data

Flash Point	not applicable	UEL (%)	not available
Autoignition Temp.	not applicable	LEL (%)	not available

Fire Extinguishing Media

Use agent most appropriate to extinguish surrounding fire; substance is noncombustible.

Special Fire-Fighting Procedures

Avoid breathing vapors. Use self-contained breathing apparatus. Prevent contact with skin and eyes. Firefighters should wear proper protective equipment.

Unusual Fire and Explosion Hazards

None.

Section V - Health Hazard Data

PEL	Water: none listed Glutaraldehyde: C 0.2 ppm; C 0.8 mg/m ³	Oral Rat LD₅₀	Water: 90 mL/kg Glutaraldehyde: 134 mg/kg
		Carcinogenicity	not listed

Section VI - Reactivity Data

Stability	Stable @ pH 7.5 -8.5 for 1-2 weeks; Polymerizes @ pH 9.0; Oxidizes when exposed to air.	Incompatibilities	Alkalis; Strong oxidizing agents; Air.
Conditions to Avoid	Incompatible materials; Exposure to air; Excess heat.	Decomposition Products	Carbon monoxide; Carbon dioxide.

Section VII - Spills and Disposal
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Spills

Wear suitable protective equipment, including a self-contained breathing apparatus. Avoid runoff into sewers and ditches which lead to waterways. Absorb spill using an absorbent, noncombustible material such as earth, sand or vermiculite. Carefully scoop up and place into appropriate disposal container.

Disposal

Dispose in accordance with all applicable federal, state, and local regulations.

Section VIII - Protective Equipment
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Ventilation

Use adequate general or local exhaust.

Respiratory Protection

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Eye/Skin Protection

Wear safety glasses with side-shields and appropriate protective gloves and clothing to prevent skin exposure.

Section IX - Storage and Handling
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Storage Requirements

Keep container tightly closed. Should be stored at 4°C. Store in cool, dry, well-ventilated area away from incompatible substances.

Section X - Transportation

AIR (ICAO)

Proper Shipping Name:	Glutaraldehyde
Hazard Class:	6.1
Packing Group:	III
Labels:	Poisonous liquid, N.O.S.

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