



## Material Safety Data Sheet

### 1 PRODUCT IDENTIFICATION AND USE

MANUFACTURER: Diagnostic Chemicals Limited  
16 McCarville Street  
West Royalty Industrial Park  
Charlottetown, P.E.I.  
Canada C1E-2A6  
+1-902-566-1396

PRODUCT NAME: Alkaline Phosphatase-SL Assay  
CATALOGUE NUMBER: 328-10, 328-30, 328-50B, 328-OP  
PRODUCT USE: For the IN VITRO quantitative determination of alkaline phosphatase in serum.  
DATE OF MSDS PREPARATION: August 15, 2007  
MSDS PREPARED BY: John Gabriel  
EMERGENCY TELEPHONE NO.: 1- (902) 566-1396

### 2 COMPOSITION, INGREDIENT INFORMATION

<u>COMPONENT</u>	<u>CAS REGISTRY NUMBER</u>	<u>ACGIH TLV</u>
<b>ALP-SL Buffer Reagent (R1):</b>		
2-amino-2-methyl-1-propanol 7.4 % w/w	124-68-5	not available
Hydrogen chloride 0.42 % w/w	7647-01-1	C 2 ppm (STEL)
<b>ALP-SL Substrate Reagent (R2):</b>		
Phenol 0.47 % w/w	108-95-2	5 ppm (TWA)

### 3 HAZARDOUS IDENTIFICATION

#### EMERGENCY OVERVIEW:

ALP-SL Reagent 1 is corrosive. To the best of our knowledge ALP-SL Substrate Reagent is not hazardous as defined by OSHA (US) or WHMIS (Canada), or dangerous by EU Directives.

#### POTENTIAL HEALTH EFFECTS:

ROUTE OF ENTRY/EXPOSURE: EYE CONTACT: [X] SKIN CONTACT: [X] INHALATION: [X] INGESTION: [X]  
SKIN ABSORPTION: [X]

#### EFFECTS OF ACUTE EXPOSURE TO PRODUCTS:

##### ALP-SL Buffer Reagent 1:

EYES: Buffer Reagent may cause burns.  
SKIN: Buffer Reagent may cause burns.  
INHALATION: Buffer Reagent may cause coughing and burns to mucous membranes and upper respiratory tract.  
INGESTION: Buffer Reagent may cause digestive tract burns with abdominal pains.

##### ALP-SL Substrate Reagent:

EYES: Substrate Reagent may cause irritation.  
SKIN: Substrate Reagent may cause irritation.  
INHALATION: Substrate Reagent may cause irritation to mucous membranes and upper respiratory tract.  
INGESTION: Substrate Reagent may be harmful if ingested.

#### EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:

Exposure to hydrogen chloride has shown to cause embryo and fetus abnormalities in rats.  
Abnormal development of offspring of animals exposed to phenol by the oral route has been reported.

#### **4 FIRST AID MEASURES**

EYES: Flush eyes with water for at least 15 minutes and obtain medical attention.

SKIN: In case of contact, immediately flush area with plenty of water. If irritation continues seek medical attention.

INHALATION: If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and obtain medical attention.

INGESTION: If ingested, drink plenty of fluids and obtain medical attention.

#### **5 FIRE AND EXPLOSION HAZARDS**

FLAMMABLE: No

FLASH POINT: not available

FLAMMABLE LIMITS (% in Air): Lower: not available. Upper: not available

EXTINGUISHING MEDIA: As appropriate for fires in surrounding materials.

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

AUTOIGNITION TEMPERATURE: not available

HAZARDOUS COMBUSTION PRODUCTS: not available

EXPLOSION DATA: Sensitivity to mechanical impact: not available. Sensitivity to static discharge: not available

#### **6 ACCIDENTAL RELEASE MEASURES**

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL: Ventilate the area. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material and place in waste container. Wash surrounding area. Dispose of spilled and contaminated material in accordance with federal, provincial, state, and local regulations.

#### **7 HANDLING AND STORAGE**

HANDLING PROCEDURES AND EQUIPMENT: Avoid contact. Do not get in eyes, on skin, or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse.

STORAGE REQUIREMENTS: 2-8 °C

INCOMPATIBILITIES: not available

HAZARDOUS DECOMPOSITION PRODUCTS: not available

#### **8 EXPOSURE CONTROLS, PERSONAL PROTECTION**

ENGINEERING CONTROLS: Local exhaust not required under normal circumstances.

PERSONAL PROTECTIVE CLOTHING (PPE): Safety glasses with side-shields, lab coat, rubber nitrile or other impermeable gloves.

RESPIRATORY PROTECTION: none required.

EXPOSURE LIMITS: not available

#### **9 PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: ALP-SL Buffer Reagent 1 is a clear and colorless solution. ALP-SL Substrate Reagent is a clear yellow solution.

ODOUR: Odourless

ODOUR THRESHOLD: not available

MELTING POINT: not available

BOILING POINT: not available

SPECIFIC GRAVITY: ALP-SL Buffer Reagent 1 = 1.011; ALP-SL Substrate Reagent = 1.010

VAPOUR PRESSURE: not available

VAPOUR DENSITY: not available

WATER SOLUBILITY: soluble

EVAPORATION RATE: not available

pH at 25 °C: ALP-SL Buffer Reagent 1 = 10.5; ALP-SL Substrate Reagent = 8.6

COEFFICIENT OF OIL/WATER DISTRIBUTION: not available

#### **10 STABILITY AND REACTIVITY**

STABILITY: Stable

POSSIBLE HAZARDOUS REACTIONS/CONDITIONS: not available

CONDITIONS TO AVOID: not available

MATERIALS TO AVOID: not available

HAZARDOUS DECOMPOSITION PRODUCTS: not available.

## **11 TOXICOLOGICAL INFORMATION**

Hydrogen chloride  
LD50: 900 mg/kg, oral rabbit  
LC50: 3124 ppm/1H, inhalation rat

Phenol  
HDLO: 140 mg/kg, oral human  
LD50: 317 mg/kg, oral rat  
LD50: 669 mg/kg, skin rabbit

2-amino-2- methyl-1-propanol  
LD50: 2900 mg/kg, oral rat  
LD50: >2000 mg/kg, skin rabbit

SENSITIZATION TO PRODUCT: not available  
NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS: not available  
IRRITANCY OF PRODUCT: not available

## **12 ECOLOGICAL INFORMATION**

not available

## **13 DISPOSAL CONSIDERATIONS**

RECOMMENDATION FOR DISPOSAL OF UNUSED PRODUCT: Observe all federal, provincial, state and local regulations.

RECOMMENDATION FOR DISPOSAL OF PACKAGING: Observe all federal, provincial, state and local regulations.

## **14 TRANSPORT INFORMATION**

SPECIAL SHIPPING INFORMATION:  
ALP-SL Buffer Reagent 1: UN1760, Corrosive Liquid, NOS (2-amino-2-methyl-1-propanol, hydrochloric acid), Class 8, PGIII  
ALP-SL Substrate Reagent: not regulated

## **15 REGULATORY INFORMATION**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

ALP-SL Buffer Reagent:

RISK PHRASES: R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R34 Causes burns

SAFETY PHRASES: S26 In case of contact with eyes, rinse immediately with plenty of water  
S35 This material and its container must be disposed of in a safe way.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible)

Canada: WHMIS Classification-Corrosive Class E  
US OSHA: Hazardous substance under 29 CFR Section 1910, Subpart Z

## **16 OTHER INFORMATION**

The information provided on this Material Safety Data Sheet is provided in the interest of promoting safe handling of the material. While this information is believed to be correct, DCL makes no warranty in respect to any of the information disclosed. Observe all federal, provincial, state and local laws concerning health and the environment.

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