biohelix®

MATERIAL SAFETY DATA SHEET

NFORMATION CALLS	1-866-800-5458
FAX	1-978-927-3382
E-MAIL	information@biohelix.com
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General Use
IsoAmp® Rapid Nucleic Acid Detection Kits

SECTION 1 - PRODUCT INFORMATION

Product Name: IsoAmp® II Enzyme Mix

SECTION 2 - COMPOSITION/ INFORMATION ON INGREDIENT

1. Glycerol	50%	Cas.	#56-81-5
2. Potassium Choride	<1%	Cas.	#7447-40-7
3. Tris-HCl	<1%	Cas.	#77-86-1
4. EDTA	<1%	Cas.	#60-00-4
5. Dithiothreitol	<1%	Cas.	#3483-12-3
6. Triton X-100	<1%	Cas.	#9002-93-1

CHEMICAL NAME: GLYCEROL
CAS No.: 56-81-5 MF: C3H803 EC No.: 200-289-5

SYNONYMS: CITIFLOUR AF 2* GLYCERIN* GLYCERIN, ANHYDROUS* GLYCERINE* GLYCERINE MIST (ACGIH, OSHA)* GLYCERIN, SYNTHETIC* CLYCERITOL GLYCYL ALCOHOL* CLYZERIN, WASSERFREI (GERMAN)* GROCOLENE* OSMOGLYN* 1,2,3-PROPANETRIOL* STAR* SYNTHETIC GLYCERIN* TECHNICAL GLYCERINE* TRIHYDROXYPROPANE* 1,2,3-TRIHYDROXYPROPANE.

SECTION 3 - HADARDOUS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS:

CAUTION
Avoid contact by inhalation, skin and ingestion.

Target Organ (s):
Kidney, Hygroscopic.

SECTION 4 - FIRST AID MEASURES:

EMERGENCY OVERVIEW: OCCUPATOINAL EXPOSURE PRESENTS LITTLE OR NO HEALTH HAZARD.

POTENTIAL HEALTH EFFECTS:

EYE EXPOSURE: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

I**NHALATION EXPOSURE:** If inhaled, remove to fresh air. If breathing is difficult, call a physician.

DERMAL EXPOSURE: In case of contact, immediately wash skin with soap and copious amounts of water. Remove clothing and call a physician.

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

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing Media:
-Water Spray
-Carbon Dioxide, Dry Chemical powder or appropriate foam

Unusual Fire and Explosions Hazard (s):
Emits toxic fumes under fire conditions.

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

Prevent contact with skin and eyes.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PROCEDURE(S) OF PERSONAL PRECAUTION(S):
Wear self-contained breathing apparatus, chemical safety goggles, rubber boots, and chemically resistant gloves.

METHODS FOR CLEANING UP:
Absorb on sand or vermiculite and place in a closed container for disposal.

SECTION 7 - HANDLING AND STORAGE

HANDLING: User Exposure: Avoid contact with eyes, skin, and clothing. Avoid inhalation. Avoid prolonged or repeated exposure.
STORAGE: Suitable: Keep tightly closed. Store at -20°C

SECTION 8 - EXPOSURE CONTROLS/PPE

Engineering Controls: Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment:

Respiratory:
NIOSH/MSHA-approved respirator.

Hand:
Compatible chemical-resistant gloves.

Eye:
Compatible safety goggles.

General Hygiene Measures:

Wash thoroughly after handing.
Wash contaminated clothing before use.

AVOID INHALATION

KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.
FREEZE.
STORE AT –20 ºC.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties:

Melting Point: 20°C
Boling Point: 182°C
Flash Point: >392°F, >200°C

Explosion Limits in Air:

Lower: 0.9%
Vapor Density: 3.1 G/L
Specific Gravity: 1.262
pH: 5.5-8.0
Solubility: Water -Z26130
Vapor Pressure: < 1 MMHG @ 20°C

SECTION 10 - STABILITY AND REACTIVITY

Stability:
Stable

Materials to Avoid:
Strong oxidizing agents, strong bases.

Hazardous Decomposition Products:
Carbon Monoxide, Carbon Dioxide.

Hazardous Decomposition Products:
Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Route of Exposure:

Skin contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption.

Materials may be irritating to mucous membranes and upper respiratory tract.

RTECS #: MA8050000
GYLCEROL

Chronic Effects: Target organs, Kidney

To the best of our knowledge, the properties have not yet been thoroughly investigated.

IRRITATION DATA:

SKN-RBT 500 MG/24H MLD	85JCAE -, 207, 1986
EYE-RBT 126 MG MLD	BIOFX* 9-4/970
EYE-RBT 500 MG/24H MLD	85JCAE -, 207, 1986

TOXICITY DATA:

ORL-RAT	**LD50:**	12600 MG/KG	FEPRA7 4, 142, 1945
IHL-RAT	**LC50:**	<570 MG/M3/1H	BIOFX* 9-4/970
IPR-RAT	**LD50:**	4420 MG/KG	RCOCB8 56, 125, 1987
SCU-RAT	**LD50:**	100 MG/KG	NIIRDN 6, 215, 1982
IVN-RAT	**LD50:**	5566 MG/KG	ARZNAD 26, 1581, 1976
ORL-MUS	**LD50:**	4090 MG/KG	FRZKAP (6), 56, 1977
IPR-MUS	**LD50:**	8700 MG/KG	ARZNAD 28, 1579, 1978
SCU-MUS	**LD50:**	91 MG/KG	NIIRDN 6, 215, 1982
IVN-MUS	**LD50:**	4250 MG/KG	JAPMA8 39, 583, 1950
ORL-RBT	**LD50:**	27 MG/KG	DMDJAP 31, 276, 1959
SKN-RBT	**LD50:**	>10 MG/KG	BIOFX* 9-4/970
IVN-RBT	**LD50:**	53 MG/KG	NIIRDN 6, 215, 1982
ORL-GPG	**LD50:**	7750 MG/KG	JIHTAB 23, 259, 1941

TARGET ORGAN DATA:

Behavioral (headache)
Gastrointestinal (nausea or vomiting)
Kidney, ureter, bladder (changes in tubules)
Kidney, ureter, bladder (changes in urine composition)
Paternal effects (spermatogenesis)
Paternal effects (testes, epididymis, sperm duct)
Effects on fertility (male fertility index)
Effects on fertility (post-implantation mortality)

Only selected registry of toxic effects of chemical substance (RTECS) data is presented here. See actual entry in RTECS.

SECTION 12 - ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state and local environmental regulations.

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

Contact BioHelix Corporation for transport information.

SECTION 15 - REGULATORY INFORMATION

Reviews, standards and regulations:

OEL=MAK
ACGIH TLV-TWA 10 MG/M3 DTLVS* TLV/BEI, 1999
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTER FERAC 54, 7740, 1989.
MSHA STANDARD: NUISANCE PARTICULATES (MIST)
DTLWS* 3,20, 1973
OSHA PEL (GEN INDU): 8H TWA 15 MG/M3, TOTAL DUST
CFRGBR 29, 1910. 1000, 1994
OSHA PEL (GEN INDU): 8H TWA 5 MG/M3, RESPIRABLE FRACTION
CFRGBR 29, 1910. 1000, 1994
OSHA PEL (CONSTRUC): 8H TWA 15 MG/M3, TOTAL DUST
CFRGBR 29, 1926.55, 1994
OSHA PEL (CONSTRUC): 8H TWA 5 MG/M3, RESPIRABLE FRACTION
CFRGBR 29, 1926.55, 1994
OSHA PEL (SHIPYARD): 8H TWA 15MG/M3, TOTAL DUST
CFRGBR 29, 1915. 1000, 1993
OSHA PEL (SHIPYARD): 8H TWA 5 MG/M3, RESPIRABLE FRACTION
CFRGBR 29, 1915.1000, 1993
OEL –AUSTRALIA: TWA 10 MG/M3, JAN 1993
OEL –BELGIUM: TWA 10 MG/M3, JAN 1993
OEL –FINLAND: TWA 20 MG/M3, JAN 1999
OEL –FRANCE: VME 10 MG/M3, JAN 1999
OEL - THE NETHERLANDS: MAC-TGG 10 MG/M3, JAN 1999
OEL –UNITED KINGDOM: TWA 10 MG/M3, MIST SEPT 2000
OEL –ARGENTINA, BULGARIA, COLUMBIA, JAPAN, KOREA CHECK ACC
NOHS 1974: HZD 35085; NIS 358; TNF 86657; NOS 198; TNE 1085329
NOHS 1983: HZD 35085; NIS 310; TNF 67054; NOS 215; TNE 2135546; TFE 1346631
EPA TSCA SECTION 8 (B) CHEMICAL INVENTORY
EPA TSCA SECTION 8 (D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JAN 2001

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide.

BioHelix Corporation shall not be held liable for any damage resulting from handlin or from contact with the above product.