

Mucolyse

Section 1. Chemical product and company identification

Common name	: Mucolyse	Code
Trade name	: Mucolyse:	PL701
Material uses	: Mucolyse is a sputum liquefying agent used to digest and thin out the sputum, thus enhancing the isolation of organisms responsible for chronic lung disease.	
Supplier/Manufacturer	: Pro-Lab Diagnostics, 20 Mural Street, Unit 4, Richmond Hill, ON, Canada L4B 1K3 Tel: +1-905-731-0300 Fax: +1-905-731-0206 www.pro-lab.com	
In case of emergency	: 905-731-0300 – Monday to Friday 8:30 am to 5:00 pm Eastern Standard Time. 416-230-0692 – Outside the above hours.	

Section 2. Hazards identification

Physical state	: Solid.
Emergency overview	: WARNING ! HARMFUL IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: MUCOUS MEMBRANES, SKIN. Do not ingest. Avoid contact with skin and clothing. Avoid breathing dust. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects	
Eyes	: Irritating to eyes.
Skin	: Irritating to skin.
Inhalation	: Irritating to respiratory system.
Ingestion	: Harmful if swallowed.
Potential chronic health effects	: Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. Mutagenic effects: Not available. Teratogenic effects: Not available.
Medical conditions aggravated by over-exposure	: Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

Section 3. Composition, Information on Ingredients

	CAS number	% by weight
United States		
Phosphoric acid, sodium salt	7558-79-4	40 - 60
2,3-Butanediol, 1,4-dimercapto-, (r*,r*)-	3483-12-3	10 - 13
Canada		
Phosphoric acid, sodium salt	7558-79-4	40 - 60
2,3-Butanediol, 1,4-dimercapto-, (r*,r*)-	3483-12-3	10 - 13

This material is classified hazardous under OSHA regulations in the United States and the WHMIS Controlled Product Regulation in Canada.

See Chapters 8, 11 and 14 for details.

Section 4. First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention.
- Skin contact** : Wash with soap and water. Get medical attention.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.

Section 5. Fire fighting measures

- Flammability of the product** : May be combustible at high temperature.
- Flash point** : The lowest known value is Closed cup: >109°C (228.2°F). (Pensky-Martens.). (2,3-Butanediol, 1,4-dimercapto-, (r*,r*)-)
- Products of combustion** : These products are carbon oxides, sulfur oxides, phosphates. Some metallic oxides.
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.
- No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Store between 2°C (36°F) to 8°C (46°F).

Section 8. Exposure controls, personal protection

- Engineering controls** : Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection

Eyes

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: Safety glasses.



Respiratory Hands

- : Not applicable.
- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended : Disposable vinyl gloves.



Skin/Body

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: Lab coat.



Personal protection in case of a large spill : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

**Product name
United States**
Exposure limits

Phosphoric acid, sodium salt

ACGIH TLV (United States).

 TWA: 10 mg/m³ 8 hour/hours. Form: Particulate.

 TWA: 3 mg/m³ 8 hour/hours. Form: Respirable

Canada

Phosphoric acid, sodium salt

ACGIH TLV (United States).

 TWA: 10 mg/m³ 8 hour/hours. Form: Particulate.

 TWA: 3 mg/m³ 8 hour/hours. Form: Respirable

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state	: Solid.
pH	: Basic.
Melting/freezing point	: Weighted average: 808.14°C (1486.7°F)
Specific gravity	: Weighted average: 1.52 (Water = 1)
Vapor pressure	: The highest known value is <0.01 kPa (<0.1 mm Hg) (at 20°C) (Phosphoric acid, sodium salt).
Vapor density	: The highest known value is 5.3 (Air = 1) (2,3-Butanediol, 1,4-dimercapto-, (r*,r*)-).
Ionicity (in water)	: Amphoteric. (Phosphoric acid, sodium salt).
Solubility	: Soluble in cold water, hot water.

Section 10. Stability and reactivity

Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Reactive with oxidizing materials, acids and alkalis.
Hazardous polymerization	: Will not occur.

Section 11. Toxicological information

Toxicity data

Ingredient name	Test	Result	Route	Species
Phosphoric acid, sodium salt	LD50	>2000 mg/kg	Oral	Rat
	LD50	>5000 mg/kg	Dermal	Rabbit
2,3-Butanediol, 1,4-dimercapto-, (r*,r*)-	LD50	400 mg/kg	Oral	Rat

Acute Effects

Eyes	: Irritating to eyes.
Skin	: Irritating to skin.
Inhalation	: Irritating to respiratory system.
Ingestion	: Harmful if swallowed.

- Potential chronic health effects** : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
Mutagenic effects: Not available.
Teratogenic effects: Not available.
- Target organs** : Contains material which causes damage to the following organs: mucous membranes, skin.

Section 12. Ecological information

- Products of degradation** : The final products of biodegradation are carbon oxides and water. Nitrogen and sulfur oxides and metal salts may also be produced in some cases.

Section 13. Disposal considerations

- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

- Classification**
TDG/DOT/IMDG/IATA: Not regulated.

Label
Not applicable.

Additional information
Not applicable.

Section 15. Regulatory information

United States

- HCS Classification** : Toxic material
Irritating material
Target organ effects
- U.S. Federal regulations** : TSCA : All components listed.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Phosphoric acid, sodium salt
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Phosphoric acid, sodium salt: Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Phosphoric acid, sodium salt
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
- State regulations** : Pennsylvania RTK: Phosphoric acid, sodium salt: (environmental hazard, generic environmental hazard)
Massachusetts RTK: Phosphoric acid, sodium salt
New Jersey: Phosphoric acid, sodium salt

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).



DSL : All components listed.

International regulations

International lists : All components listed are listed on major international inventories or exempted from being listed in Australia (AICS), Europe (EINECS/ELINCS), Korea (TCCL), Japan (METI/MOL), Philippines (RA6969).

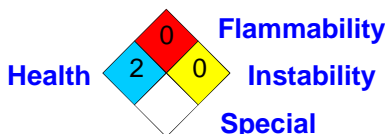
Section 16. Other information

Label requirements : HARMFUL IF SWALLOWED.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
MUCOUS MEMBRANES, SKIN.

Hazardous Material Information System (U.S.A.) :

Health	*	2
Fire hazard		0
Reactivity		0
Personal protection		C

National Fire Protection Association (U.S.A.) :



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Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.