

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0
Page 1 of 13

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

OTHER NAMES

"laboratory reagent", stain

PRODUCT USE

Laboratory reagent / stain

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

technical@sdfine.com

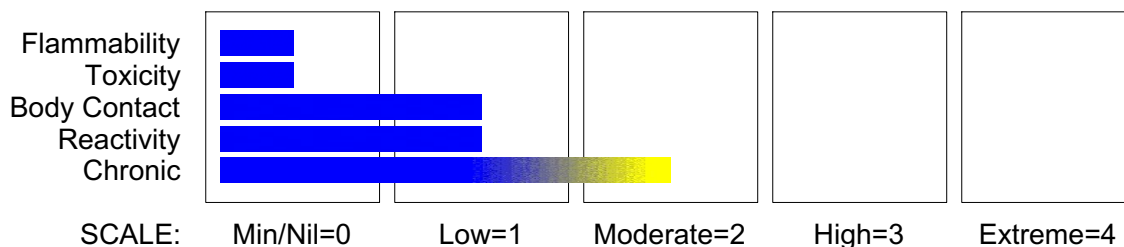
Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

Section 2 - HAZARDS IDENTIFICATION

HAZARD RATINGS



GHS Classification

Carcinogen Category 2

Serious Eye Damage Category 1

Skin Corrosion/Irritation Category 2



continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 2 of 13

Section 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria:

H351 H315 H316 H318

Suspected of causing cancer

Causes skin irritation

Causes mild skin irritation

Causes serious eye damage

PRECAUTIONARY STATEMENTS

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/ attention.

Immediately call a POISON CENTER or doctor/physician.

If skin irritation occurs: Get medical advice/ attention.

Storage

Store locked up.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
hematoxylin	517-28-2	1
aluminium sulfate, hydrated (filter alum)	16828-11-8	4
sodium iodate	7681-55-2	0.02
acetic acid glacial	64-19-7	2
glycerol	56-81-5	30
water	7732-18-5	62.98

Section 4 - FIRST AID MEASURES

SWALLOWED

» Rinse mouth out with plenty of water.

For advice, contact a Poisons Information Centre or a doctor.

- If swallowed do NOT induce vomiting.

- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

- Observe the patient carefully.

- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious

- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

- Seek medical advice.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 3 of 13

Section 4 - FIRST AID MEASURES

EYE

» If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

» If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

» Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- » There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Non combustible.
 - Not considered to be a significant fire risk, however containers may burn.
 - In a fire may decompose on heating and produce toxic / corrosive fumes.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
Decomposition may produce toxic fumes of: sulfur oxides (SOx) and oxides of aluminium.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.
- In presence of moisture, the material is corrosive to aluminium, zinc and tin producing highly flammable hydrogen gas.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 4 of 13

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

- » Minor hazard.
- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- » Avoid generating and breathing mist.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 5 of 13

Section 7 - HANDLING AND STORAGE

Segregate from combustible materials.

- DO NOT use aluminium, galvanised or tin-plated containers.

STORAGE REQUIREMENTS

- DO NOT use unlined steel containers.
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ X + X X +

+: May be stored together

O: May be stored together with specific precautions

X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- hematoxylin:
- aluminium sulfate, hydrated (filter alum):

CAS:517- 28- 2

CAS:16828- 11- 8 CAS:17927- 65- 0 CAS:10043- 01- 3

- sodium iodate:
- acetic acid glacial:
- glycerol:
- water:

CAS:7681- 55- 2

CAS:64- 19- 7

CAS:56- 81- 5

CAS:7732- 18- 5

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)
acetic acid glacial	

Revised IDLH Value (ppm)
50

ODOUR SAFETY FACTOR (OSF)

OSF=21 ("ACETIC ACID, GLACIAL")

» Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 6 of 13

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

		are aware by smell that the Exposure Standard (TLV- TWA for example) is being reached, even when distracted by working activities
B	26- 550	As " A" for 50- 90% of persons being distracted
C	1- 26	As " A" for less than 50% of persons being distracted
D	0.18- 1	10- 50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As " D" for less than 10% of persons aware of being tested

MATERIAL DATA

» None assigned. Refer to individual constituents.

INGREDIENT DATA

HEMATOXYLIN:

» It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

ALUMINIUM SULFATE, HYDRATED (FILTER ALUM):

» The TLV is based on the exposures to aluminium chloride and the amount of hydrolysed acid and the corresponding acid TLV to provide the same degree of freedom from irritation. Workers chronically exposed to aluminium dusts and fumes have developed severe pulmonary reactions including fibrosis, emphysema and pneumothorax. A much rarer encephalopathy has also been described.

SODIUM IODATE:

» These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,
- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

- to brief exposures to higher concentrations
- nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 7 of 13

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

This exposure standard applies to particles which

- are insoluble or poorly soluble* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

ACETIC ACID GLACIAL:

» for acetic acid:

NOTE:Detector tubes for acetic acid, measuring in excess of 1 ppm, are commercially available.

Exposure at or below the TLV-TWA and TLV-STEL is thought to protect the worker against conjunctival, nose and respiratory tract irritation.

Odour Safety Factor(OSF)

OSF=21 ("ACETIC ACID, GLACIAL").

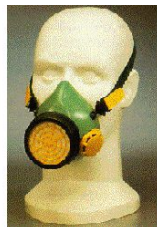
GLYCEROL:

The mist is considered to be a nuisance particulate which appears to have little adverse effect on the lung and does not produce significant organic disease or toxic effects. OSHA concluded that this limit would protect the worker from kidney damage and perhaps, testicular effects.

WATER:

» No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- Barrier cream with polyethylene gloves or • Rubber Gloves.
- Safety footwear.

OTHER

- Overalls.
- Eyewash unit.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 8 of 13

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATOR

» Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	AB- AUS P	-
1000	50	-	AB- AUS P
5000	50	Airline *	-
5000	100	-	AB- 2 P
10000	100	-	AB- 3 P
	100+		Airline**

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

» Use in a well-ventilated area.

None required when handling small quantities.

OTHERWISE: General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:
solvent, vapours, degreasing etc., evaporating from tank (in still air).
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

Air Speed:
0.25- 0.5 m/s (50- 100 f/min)

0.5- 1 m/s (100- 200 f/min.)

1- 2.5 m/s (200- 500 f/min.)

2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only.

3: Intermittent, low production.

4: Large hood or large air mass in motion

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood- local control only

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 9 of 13

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Aqueous solution with a slight characteristic odour; mixes with water.

PHYSICAL PROPERTIES

Liquid.

Mixes with water.

Molecular Weight: Not applicable

Melting Range (°C): Not available

Solubility in water (g/L): Soluble

pH (1% solution): Not available

Volatile Component (%vol): >90

Relative Vapour Density (air=1): > 1

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Liquid

Boiling Range (°C): >100

Specific Gravity (water=1): 1.00- 1.05

pH (as supplied): Not applicable

Vapour Pressure (kPa): As water.

Evaporation Rate: Not available

Flash Point (°C): Non Flammable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available.

Material

Value

GLYCEROL:

log Kow

- 2.66- - 2.47

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

» Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 10 of 13

Section 11 - TOXICOLOGICAL INFORMATION

evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

» Considered an unlikely route of entry in commercial/industrial environments.

» Ingestion may result in nausea, abdominal irritation, pain and vomiting.

» Sulfate salts are poorly absorbed from the gastro-intestinal tract but because of osmotic activity are able to draw water from the lumen to produce diarrhoea (purging).

Sulfate ion usually has little toxicological potential.

EYE

» Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

» The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

» The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

» Open cuts, abraded or irritated skin should not be exposed to this material.

» The material may accentuate any pre-existing skin condition.

» The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

INHALED

» The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

» Not normally a hazard due to non-volatile nature of product.

CHRONIC HEALTH EFFECTS

» On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

» Principal routes of exposure are usually by skin contact with the material and inhalation of generated dust.

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

TOXICITY AND IRRITATION

» Not available. Refer to individual constituents.

HEMATOXYLIN:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

» No significant acute toxicological data identified in literature search.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 11 of 13

Section 11 - TOXICOLOGICAL INFORMATION

Limited evidence of a carcinogenic effect.
May be carcinogenic [Hawleys]

ALUMINIUM SULFATE, HYDRATED (FILTER ALUM):

» No significant acute toxicological data identified in literature search.

SODIUM IODATE:

» No significant acute toxicological data identified in literature search.

ACETIC ACID GLACIAL:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (human) TDLo: 1.47 mg/kg

Unreport (man) LDLo: 308 mg/kg

Oral (rat) LD50: 3310 mg/kg

Inhalation (human) TCLo: 816 ppm/3 min

Inhalation (rat) LCLo: 16000 ppm/4 hr

Dermal (rabbit) LD50: 1060 mg/kg

» Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

NOAELs following repeated exposure to acetic acid and its salts range from 210 mg/kg bw/day (2-4 month acetic acid drinking water study; systemic toxicity) to 3600 mg/kg bw/day (acetic acid, sodium salt, 4 week dietary study; no effects reported). Signs of irritation/corrosion at the site of contact as well as systemic toxicity have been reported. Prolonged inhalation exposure to acetic acid results in muscle imbalance, increase in blood cholinesterase activity, decreases in albumins and decreased growth at concentrations greater than 0.01 mg/m³/day.

Groups of 20 mice/sex were given 0.025% sodium acetate in drinking water (about 60 mg/kg bw/day) for 1 week before breeding, during a 9-day breeding period and (females only) throughout pregnancy, lactation and until the offspring were weaned at 3 weeks of age. No effects on fertility were observed. The male offspring were given the same solution until they were 5-7 weeks old and were then examined in a 24-hour activity test. Examination of the litters revealed no overt deformities and normal pup weights at day 1 and day 21. The activity of offspring of the treated group was lower than that of controls during the first 12 hours but was similar during the second 12 hours. It is unknown if the decreased activity observed in the sodium acetate treated group to was a result of exposure in utero and/or post-weaning, since the pups were exposed during both time periods.). Acetic acid had no effects on implantation or on maternal or fetal survival in rats, mice or rabbits dosed via gavage during gestation days 6-19 at doses up to 1600 mg/kg/day. The number of abnormalities seen in either soft or skeletal tissues of the test groups did not differ from the number occurring in the controls. Sodium acetate had no effect on pregnant mice or offspring when mice were administered 1000 mg/kg bw, by gavage on days 8-12 of gestation.

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 12 of 13

Section 11 - TOXICOLOGICAL INFORMATION

GLYCEROL:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (Rat) LD50: 12600 mg/kg

» The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

IRRITATION

WATER:

» No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

» Recycle wherever possible. Consult manufacturer for recycling options.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

Melb Health-WH Lillie Mayer Haematoxylin (Pathology) (CAS: None):

No regulations applicable

aluminium sulfate, hydrated (filter alum) (CAS: 16828-11-8) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals
aluminium sulfate, hydrated (filter alum) (CAS: 17927-65-0) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

acetic acid glacial (CAS: 64-19-7) is found on the following regulatory lists;
CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
International Council of Chemical Associations (ICCA) - High Production Volume List

continued...

HEMATOXYLIN MAYER'S SOLUTION (M.S.)

GHS Safety Data Sheet

Version No:2.0

Page 13 of 13

Section 15 - REGULATORY INFORMATION

OECD Representative List of High Production Volume (HPV) Chemicals

glycerol (CAS: 56-81-5) is found on the following regulatory lists;
CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 18: List of products to which the Code does not apply
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

water (CAS: 7732-18-5) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 18: List of products to which the Code does not apply
OECD Representative List of High Production Volume (HPV) Chemicals

No data available for hematoxylin as CAS: 517-28-2.
No data available for sodium iodate as CAS: 7681-55-2.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
aluminium sulfate,	16828- 11- 8, 17927- 65- 0
hydrated (filter alum)	

EXPOSURE STANDARD FOR MIXTURES

» "Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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