MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name: ß-Mercapthoethanol 50 mM in PBS
Product number: P07-05020

Brand: PAN Biotech

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: PAN Biotech GmbH
Am Gewerbepark 13
94501 Aidenbach
GERMANY

Telephone: +49-(0)8543-6016-30
Fax: +49-(0)8543-6016-49
E-mail: info@pan-biotech.de

1.4 Emergency telephone number

Emergency phone: +49-(0)8543-6016-31

2. HAZARDS INDENTIFICATION

The product is classified and labelled in accordance with Directive 1999/45/EC. Regulation (EC) no 1272/2008

Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 2)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Skin sensitization (Category 1)
Specific target organ toxicity – repeated exposure, Oral (Category 2), Liver, Heart
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999 /45/EC

Toxic by inhalation, in contact with skin and if swallowed. Irritating to skin. Risk of serious damage to eyes. May cause sensitization by skin contact. Harmful: danger of serious damage to health by prolonged exposure if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Labelling according Regulation (EC) No 1272/2008 [CLP]

Signal word	Danger

Hazard statements

H301 + H331	Toxic if swallowed or if inhaled.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs (Liver, Heart) through prolonged or repeated exposure if swallowed.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P301 + P310	If swallowed: Immediately call a poison centre or a physician.
P302 + P350	If on skin: Gently wash with plenty of soap and water.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. .

3. COMPOSITION/INFORMATION ON INGREDIENTS

Bezeichnung	**CAS-Nr.**	**EG-Nr.**
ß-Mercaptoethanol	60-24-2	200-464-6

4. FIRST AID MEASURES

Skin contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Notes to physician	Treat symptomatically.

5. FIREFEIGHTING MEASURES

Suitable extinguishing media	Dry chemical, water spray, Carbon dioxide (CO2), Foam
Special protective equipment for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.
Special hazards arising from the substance	Carbon oxides, Sulphur oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Methods for cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-bushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and he standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full – face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full – face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid
Appearance	no data available
Odour	no data available
Boiling Point/Range	no data available
Melting Point/Range	no data available
Flash Point	no data available
Autoignition temperature	no data available
Oxidising properties	no data available
Water solubility	soluble

10. STABILITY AND REACTIVITY

Reactivity	no data available
Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	no data available
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Metals, Oxidizing agents
Hazardous decomposition products	no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral – rat – 98 – 162 mg/kg
LC50 Inhalation – rat – 4h – 2 mg/L
LC50 Inhalation – rat – 4h – 625 ppm
LD50 Dermal – rabbit – 112 – 224 mg/kg

Skin corrosion/irritation
Skin – rabbit – Irritating to skin. – Draize Test

Serious eye damage/eye irritation
Eyes – rabbit – Risk of serious damage to eyes.

Respiratory or skin sensitisation
Maximisation Test – guinea pig – OECD Test Guidline 406 – May cause sensitisation by skin contact.

Germ cell mutagenicity
Experiments showed mutagenic effects in cultured bacterial cells.

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

Reproductive toxicity
no data available

Specific target organ toxicity – single exposure
No data available

Specific target organ toxicity – repeated exposure
Ingestion – May cause damage to organs through prolonged or repeated exposure. – Liver, Heart

Aspiration hazard
no data available

Additional Information
RTECS: KL5600000
Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Weakness, Unconsciousness, material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, spasm, inflammation and edema of the larynx, inflammation and edema of the bronchi, pneumonitis, pulmonary edema

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC – Leuciscus idus (Golden orfe) – 46 – 100 mg/L – 96,0 h
Toxicity to aquatic invertebrates	EC50 – Daphnia – 0,89 mg/L – 48 h EC50 – Desmodesmus subspicatus (green algae) – 12 mg/L–72 h
Toxicity to bacteria	LC50 – Bacteria – 125 mg/L – 17 h
Persistence and degradability	
Biodegradability	Result: < 30,0 % - Not readily biodegradable. Result: 6 % - Not readily biodegradable. aerobic - Exposure time 28 d Result: < 10 % - Not readily biodegradable.
Bioaccumulative potential	Does not accumulate in organisms.
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available

Other adverse effects
Very toxic to aquatic life with long lasting effects.

Biochemical Oxygen (BOD)	105 mg/g
Chemical Oxygen Demand (COD)	1,894 mg/g

13. DISPOSAL CONSIDERATIONS

Product
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non – recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

UN-number		
ADR/RID: 2966	IMDG: 2966	IATA: 2966
UN proper shipping name		
ADR/RID: Thioglycol	IMDG: Thioglycol	IATA: Thioglycol
Transport hazard class(es)		
ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
Packaging group		
ADR/RID: II	IMDG: II	IATA: II
Environmental hazards		

ADR/RID: yes IMDG Marine Pollutant: yes IATA: no

Special precautions for user

no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EG) Nr. 1907/2006

Safety, health and environmental regulations/legislation specific fort the substance or mixture

No data available

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

Further 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. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PAN Biotech GmbH shall not be held liable for any damage resulting from handling or from contact with the above product. See www.pan-biotech.com or reverse side of invoice or packing slip for additional terms and conditions of sale.