

MATERIAL SAFETY DATA SHEET

(Effective date: Jan 2002)

SECTION I. MANUFACTURER AND PRODUCT

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Manufactured by: MQ Medical Importers
POBox 2518 Bellville 7530 South Africa
Emergency Telephone Number: 27 21 948 9052

Product: **Name:** **MaleMorph/SpermMorph.**
Cat. No: **01/2002**

Description: Papanicolaou stained human sperm slides fixed with xylene resin solution (Entellen, mounting medium).

SECTION II. PHYSICAL DATA - XYLENE

Boiling Point: 137Celsius	Specific Gravity: 0.86 @ 20C/4C
Melting Point: -minus 25 Celsius	Vapor Density: 3.7
Vapor Pressure: 8mmHg @ 20 Celsius	Evaporation Rate: 0.7
Appearance: Clear colorless liquid	Solubility: Insoluble in water

SECTION III. HAZARDOUS INGREDIENTS

Contains Xylene (Dimethyl benzene, methyltoluene)

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Fire Hazard: FLAMMABLE
Extinguishing Media: Dry chemical, foam or carbon dioxide.
Special Fire Fighting Procedures: Wear protective clothing and approved self contained breathing apparatus with full facepiece.

SECTION V. HEALTH HAZARD DATA

Toxicity data: Xylene : oral rat LD50: 4300mg/kg inhalation rat LC50: 5000ppm/4H, skin rabbit LD50: >1700mg/kg Irritation eye rabbit 87mg mild, irritation skin rabbit 500mg/24 moderate, investigated as a tumorgen, mutagen, reproductive effector.
Effects of Overexposure: Exposure to high concentrations may result in nausea, vomiting headache, ringing of ears and severe breathing difficulties.
Emergency and First Aid Procedures: Inhalation: Remove to fresh air, if not breathing give artificial respiration or oxygen. Ingestion: If swallowed vomiting may occur spontaneously, but do not induce. Skin contact: immediately flush skin with plenty of soap and water for at 15 minutes. Eye contact: Immediately flush with plenty of water.

Product: **Name:** **XYLENES**
Cat. No: **MERCK 108688**

SECTION VI. REACTIVITY DATA

Stability: Stable under ordinary conditions of use and storage
Conditions to avoid: Heat, flames, ignition sources and incompatibles.
Incompatibility: Strong oxidizing agents and strong acids
Hazardous Decomposition Products: Involvement in a fire causes formation of carbon monoxide and unidentified organic components.
Hazardous Polymerization: Will not occur

SECTION VII. SPILL OR LEAK PROCEDURES

Spills: This material is expected to be slightly toxic to aquatic life.
Waste Disposal: Should be handled as hazardous waste.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Ventilation Hood
Ventilation: Hood
Protective Gloves: Proper gloves
Eye Protection: Goggles
Other Protective Equipment: Lab coat, Class B extinguisher

SECTION IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Storage color code RED (Flammable). Protect against physical damage. Store in cool dry well ventilated location away from any area, where fire hazard may be acute.

SECTION X. DISPOSAL CONSIDERATIONS

Should be handled as hazardous waste.

SECTION XI. DISCLAIMER

SECTION II. PHYSICAL DATA - ENTELLAN

Boiling Point: 137Celsius	Specific Gravity: not available
Melting Point: Not available	Vapor Density: 0.95g/cm ³
Vapor Pressure: 8mmHg @ 20 Celsius	Evaporation Rate: not available
Appearance: Clear colorless liquid	Solubility: Insoluble in water

SECTION III. HAZARDOUS INGREDIENTS

Contains Xylene mixture of isomers (Dimethyl benzene, methyltoluene)

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Fire Hazard: FLAMMABLE
Extinguishing Media: Dry chemical, foam or carbon dioxide.
Special Fire Fighting Procedures: Wear protective clothing and approved self contained breathing apparatus with full facepiece.

SECTION V. HEALTH HAZARD DATA

Toxicity data:
Effects of Overexposure: Exposure to high concentrations may result in nausea, vomiting headache, ringing of ears and severe breathing difficulties.
Emergency and First Aid Procedures: Inhalation: Remove to fresh air, if not breathing give artificial respiration or oxygen. Ingestion: If swallowed vomiting may occur spontaneously, but do not induce. Skin contact: immediately flush skin with plenty of soap and water for at 15 minutes. Eye contact: Immediately flush with plenty of water.

Product: **Name:** **ENTELLAN**
Cat. No: **MERCK**

SECTION VI. REACTIVITY DATA

Stability: Stable under ordinary conditions of use and storage

Conditions to avoid: Heat, flames, ignition sources and incompatibles.

Substances to be avoided: Applicable to partial component(s): strong oxidizing agents, conc. sulfuric acid, nitric acid, uranium hexafluoride, sulfur.

Hazardous decomposition products: not known to date

Further information; inflammable; incompatible with light metals, various plastics, rubber; Explosible with air in a vaporous/gaseous state.

SECTION VII. SPILL OR LEAK PROCEDURES

Spills: This material is expected to be slightly toxic to aquatic life.

Waste Disposal: Should be handled as hazardous waste.

Property that must be anticipated on the basis from the toxicological main component of the preparation: Degradability: Biodegradable.

Behavior in environmental compartments: Distribution: log P(oct): 3.1-3.2 (xylene).

An appreciable bioaccumulation potential is to be expected (log P(o/w) >3).

Ecotoxic effects: Biological effects: Toxic for aquatic organisms.

Further ecologic data: Hazard for drinking water supplies. Risk of formation of explosive vapours above water surface. Do not allow to enter waters, waste water, or soil

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Ventilation Hood

Ventilation: Hood

Protective Gloves: Proper gloves

Eye Protection: Goggles

Other Protective Equipment: Lab coat, Class B extinguisher

Specific control parameter

German regulations

MAK Germany (max. workplace conc.)

Name Xylenes Value 100 ml/m³, 440 mg/m³

Peak limit II,1 resorptive substance, 2 x TLV

Embryotoxic cat. D classification not still possible in A-C categories

Skin resorption Risk of skin absorption

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: required

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

SECTION IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Storage color code RED (Flammable). Protect against physical damage. Store in cool dry well ventilated location away from any area, where fire hazard may be acute.

Person-related precautionary measures: Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Procedures for cleaning / absorption:

Take up with liquid-absorbent material. Forward for disposal. Clean up affected area.

SECTION X. DISPOSAL CONSIDERATIONS

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION II. PHYSICAL DATA – OG 6

Boiling Point: not available
Melting Point: not available
Vapor Pressure: not available
Appearance: Clear colorless liquid

Specific Gravity: 0.86 @ 20C/4C
Vapor Density: 0.83g/cm³
Evaporation Rate: not available
Solubility: Insoluble in water

SECTION III. HAZARDOUS INGREDIENTS

Contains: aqueous-ethanolic dye solution.

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Fire Hazard: Highly FLAMMABLE

Extinguishing Media: Dry chemical, foam or carbon dioxide.

Special Fire Fighting Procedures: Wear protective clothing and approved self contained breathing apparatus with full facepiece.

Suitable extinguishing media:

In adaption to materials stored in the immediate neighbourhood.

Special risks: Combustible. Vapours heavier than air. Formation of explosible mixtures possible with air.

Keep away from sources of ignition.

Special protective equipment for fire fighting: Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:

Cool container with spray water from a safe distance. Take measures to prevent electrostatic charging.

SECTION V. HEALTH HAZARD DATA

Toxicity data: *Acute toxicity*

Quantitative data on the toxicity of this product are not available.

Subacute to chronic toxicity

Applicable to partial component(s):

An embryotoxic effect need not be feared when the threshold limit value is observed.

Further toxicological information

Property that must be anticipated on the basis from the components of the preparation:

After inhalation of vapours: slight mucosal irritations. Risk of absorption.

After skin contact: After long-term exposure to the chemical: dermatitis.

After eye contact: Slight irritations.

After swallowing of large amounts: nausea and vomiting.

Systemic effects: euphoria.

After absorption of large quantities: dizziness, inebriation, narcosis, respiratory paralysis. drop in blood pressure, agitation, spasms, narcosis, coma. Symptoms may occur after a latency period has elapsed.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

Effects of Overexposure: *Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated. Filter A (acc. to DIN 3181) for vapours of organic compounds

Eye protection: required

Hand protection: required

Industrial hygiene:

Change contaminated clothing. Application of skin- protective barrier cream recommended. Wash hands after working with substance.

Emergency and First Aid Procedures: Person-related precautionary measures:

Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures: Do not allow to enter sewerage system; risk of explosion!

Procedures for cleaning / absorption:

Take up with liquid-absorbent material. Forward for disposal. Clean up affected area.

Product: **Name:** **0G-6**
Cat. No: **MERCK 106888**

SECTION VI. REACTIVITY DATA

Conditions to be avoided

Heating.

Substances to be avoided

strong oxidizing agents.

Hazardous decomposition products

no information available

Further information

highly inflammable;

Explosible with air in a vaporous/gaseous state.

SECTION VII. SPILL OR LEAK PROCEDURES

Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

Do not allow to enter waters, waste water, or soil

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Ventilation Hood

Ventilation: Hood

Protective Gloves: Proper gloves

Eye Protection: Goggles

Other Protective Equipment: Lab coat, Class B extinguisher

SECTION IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Storage color code RED (Flammable). Protect against physical damage. Store in cool dry well ventilated location away from any area, where fire hazard may be acute.

SECTION X. DISPOSAL CONSIDERATIONS

Product:

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION II. PHYSICAL DATA – EA-50 PAPANICOLAOU STAIN

Boiling Point: Not available	Specific Gravity: Not available
Melting Point: Not available	Density: 0,83g/cm ³
Vapor Pressure: Not available	Evaporation Rate: Not available
Appearance: Green alcoholic liquid	Solubility: Soluble in water

SECTION III. HAZARDOUS INGREDIENTS

Ethanol-methanol dye solution.

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Suitable extinguishing media:

Water, foam.

Special risks:

Combustible. Vapours heavier than air. Formation of explosible mixtures possible with air.

Development of hazardous combustion gases or vapours possible in the event of fire. Keep away from sources of ignition.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other information:

Contain escaping vapours with water. Take measures to prevent electrostatic charging. Prevent fire-fighting water from entering surface water or groundwater. Cool container with spray water from a safe distance.

SECTION V. HEALTH HAZARD DATA

Toxicity data: *Acute toxicity*

LD 50 (oral, rat): 5628 mg/kg (methanol).

LDLo (oral, human): 143 mg/kg (methanol).

LC 50 (inhalation, rat): 64000 ppm(V) /4 h (methanol).

The literature data available to us do not conform with the labelling prescribed by the EC. The EC has dossiers which have not been published.

Subacute to chronic toxicity

Applicable to partial component(s):

An embryotoxic effect need not be feared when the threshold limit value is observed.

Further toxicological information

Property that must be anticipated on the basis from the components of the preparation:

After inhalation of vapours: Irritation symptoms in the respiratory tract.

After skin contact: Danger of skin absorption.

After eye contact: Slight irritations. mucosal irritations.

After swallowing: After absorption of toxic quantities: nausea, vomiting, headache, dizziness, inebriation, impaired vision, blindness (Irreversible damage of the optical nerve.), acidosis, drop in blood pressure, agitation, spasms, narcosis, coma. Latency time until onset of action.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

Emergency and First Aid Procedures:: After inhalation: fresh air. Apply mouth-to-mouth respiration or mechanical ventilation if necessary.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Call in ophthalmologist.

After swallowing: make victim drink ethanol (e.g. 1 drinking glass of a 40 % alcoholic beverage). Call in physician, mentioning methanol ingestion.

If breathing stops: mouth-to-mouth respiration or mechanical ventilation.

Product: **Name:** **EA - 50**
Cat. No: **MERCK 109272**

SECTION VI. REACTIVITY DATA

Conditions to be avoided

Heating.

Substances to be avoided

alkali metals, alkaline earth metals, oxidizing agent, halogen-halogen compounds, alkali oxides, nonmetallic halides, ethylene oxide, fluorine, hydrides, anhydrides / metallic salts / acids, mercury compounds, silver compounds, chromyl chloride, uranium hexafluoride.

Hazardous decomposition products

no information available

Further information

highly inflammable;

unsuitable working materials: various plastics, rubber;

Explosible with air in a vaporous/gaseous state.

SECTION VII. SPILL OR LEAK PROCEDURES

Person-related precautionary measures:

Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system; risk of explosion!

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemisorb®). Forward for disposal. Clean up affected area.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Handling:

Notes for prevention of fire and explosion:

Keep away from sources of ignition. Take measures to prevent electrostatic charging.

Notes for safe handling:

Work under hood. Do not inhale substance.

Avoid generation of vapours/aerosols.

Storage:

Tightly closed. In a well-ventilated place. Keep away from sources of ignition and heat. At +15°C to +25°C.

Accessible only for authorized persons.

SECTION IX. SPECIAL PRECAUTIONS

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours are generated. Filter A (acc. to DIN 3181) for vapours of organic compounds

Eye protection: required

Hand protection: required

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood . Do not inhale substance.

SECTION X. DISPOSAL CONSIDERATIONS

Product:

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION II. PHYSICAL DATA – HARRIS HEMAETOXYLLIN PAPANICOLAOU STAIN

Boiling Point: not available	Specific Gravity: not available
Melting Point: - not available	Density: 1.03g/cm ³
Vapor Pressure: not available	Evaporation Rate: not available
Appearance: Dark blue odourous liquid	Solubility: Soluble in water

SECTION III. HAZARDOUS INGREDIENTS

Preparation contains inorganic and organic compounds.

Synonyms

Hematoxylin solution acc. to Harris, Colour solution acc. to Papanicolaou, Harris' Hematoxylin solution

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Suitable extinguishing media:

Water, CO₂, foam, powder.

Special risks:

Non-combustible.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:

Prevent fire-fighting water from entering surface water or groundwater.

SECTION V. HEALTH HAZARD DATA

Toxicity data: *Acute toxicity*

Quantitative data on the toxicity of this product are not available.

Subacute to chronic toxicity

Applicable to partial component(s):

An embryotoxic effect need not be feared when the threshold limit value is observed.

Further toxicological information

Property that must be anticipated on the basis from the components of the preparation:

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Slight irritations.

After eye contact: Slight irritations.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

Effects of Overexposure: Person-related precautionary measures:

Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemisorb®). Forward for disposal. Clean up affected area.

Emergency and First Aid Procedures: After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open.

After swallowing: make victim drink plenty of water, induce vomiting, call in physician.

Product: **Name:** **HARRIS HEMAETOXYLLIN**
Cat. No: **MERCK 109253**

SECTION VI. REACTIVITY DATA

Conditions to be avoided

Strong heating.

Substances to be avoided

no information available

Hazardous decomposition products

no information available

SECTION VII. SPILL OR LEAK PROCEDURES

Person-related precautionary measures:

Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemizor®). Forward for disposal. Clean up affected area.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Specific control parameter

Name Ethylene glycol

Value 20 ml/m³

52 mg/m³

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: Use recommended

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

SECTION IX. DISPOSAL CONSIDERATIONS

Product:

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.