


SAFETY DATA SHEET/ SDS MIF Solution

1 – IDENTIFICATION OF THE SUBSTANCE/ COMPANY

Name/item number MIF (modified formalin solution)
Emergency number 06131-19240 or 232466 (toxic central Mainz)
Company BioRépair GmbH
Kirchenstr. 5
74889 Sinsheim

2 – INGREDIENTS - INFORMATION

<u>Chem. name</u>	<u>EC-Nr.</u>	<u>CAS-Nr.</u>	<u>weight percent</u>	<u>Classification (67/548)</u>	<u>Classification (VO (EG 1272/2008))</u>
Formaldehyde 	200-001-8; 608-494-5	50-00-0	2.28	T; C; R23/24/25-34-43 S(1/2)-26- 36/37/39-45-51	H301 H311 H314 H331 H341 H350
Glycerol	200-289-5; 607-759-2; 616-940-5	56-81-5	1	-	-
Dest. water	231-791-2	7732-18-5	To complete 100	-	-

Identification

3 – HAZARD IDENTIFICATION FOR MIF Solution

Hazard statements:

H302
H312
H315
H317
H319
H332
H335
H413

Safety instructions:

P202
P211
P261
P262
P270
P273
P280
P301+330+351
P302+351
P304+312+340
P305+351+338
P412

4 – FIRST AID MEASURES

Breathing

Keep away from vapors and breathe fresh air. In the event of suffocation begin artificial respiration and seek medical attention

Skin contact

Remove contaminated clothing and wash immediately with plenty of soap and water. If significant or extended contact seek medical advice

Eye contact

Rinse immediately with water or a 0.9% sodium chloride solution; ensure the efficient flushing by opening the eyelids with fingers

Swallowing

Immediately rinse the mouth with plenty of water and seek medical advice

5 – FIRE-FIGHTING MEASURES

- Non-flammable
- Measures to protect rescuers
 - Wear protective clothing to avoid any contact with the skin and eyes
 - To protect against smoke a self-contained breathing apparatus must be worn

6 – ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**
- Ensure adequate ventilation
 - Further information on ecology in section 12
- 6.2 Environmental precautions**
- No special environmental precautions are required
- 6.3 Methods and materials for containment and cleaning**
- Absorb with earth, sand or other non-combustible materials and fill it into containers for later disposal

7 – HANDLING AND STORAGE

- at +5 - +25°C
- Store in supplied packaging and a dry environment
- Ensure adequate ventilation
- Do not breath vapors or mist
- Avoid contact with skin and eyes

8 – EXPOSURE CONTROLL/ INDIVIDUAL PROTECTION MEASURES

- Safety regulations when handling chemicals should be observed
- Wear protective gloves
- Wear goggles
- Wear protective clothing
- Recommended handling: under deduction
- Wash hands after handling the solution
- Do not eat or drink at work

9 – PHYSICAL AND CHEMICAL PROPERTIES

physical properties	liquid
color	colorless
odor	characteristic
pH value	pH 7
boiling point/-range	100°C / 212°F
flash point	> 105°C / > 221°F
Solubility	miscible with water in all proportions

10 – STABILITY AND REACTIVITY

Stability	stable under recommended conditions
Incompatibility with	strong oxidizers
Avoid	extreme temperatures and direct sunlight
Incompatible materials	strong bases oxidant

Hazardous decomposition products

Thermal decomposition	under normal conditions – none under heat – production of ethanol and toxic fumes
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11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Product information	This product is, following the known or available information, not acute toxic
Inhalation	Cough/ Sore throat/ Burning sensation/ Headache/ Shortness of breath/ Dizziness/ Nausea/ Weakness/ Visual disturbances
Eye contact	Water of the eye/ Redness/ Pain/ Blurred vision
Skin contact	Redness/ Pain/ Skin burns/ Dry skin
Ingestion	Burns in mouth and throat/ Nausea/ Abdominal pain/ Shock or collapse/ Diarrhoea/ Vomiting/ Convulsions/ Unconsciousness

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formaldehyde	800mg/kg (Rat)	420 mg/kg (Rat)	0.82 mg/L 0.5 h
Glycerol	5.57 g/kg (Rat)	0.1 g/kg (Rat)	570mg/cu m/1 h

Corrosion/irritation to the skin	May cause an allergic skin reaction
Eye damage/irritation	May cause irritation or damage of the eye
Sensitization	May cause an allergic skin reaction
Germ cell mutagenicity	Suspected of causing genetic defects
Carcinogenicity	May cause cancer

Further information

Other hazardous properties can not be excluded. The product should be handled with the same caution as is the case with other chemicals

12 – ECOLOGICAL INFORMATION

Chemical name	Toxicity to alga	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Formaldehyde	-	0.032 – 0.226: 96 h Oncorhynchus mykiss ml/l LC50 flow-through 100 – 136: 96 h Oncorhynchus mykiss mg/l LC50 static 1510: 96h Lepomis macrochirus µg/l LC 50 static 22.6 -25.7: 96 h Pimephales promelas mg/l LC50 flow-through 23.2 – 29.7: 96 h Pimephales promelas mg/l LC50 static 41: 96 h Brachydanio rerio mg/l LC50 static	11.3 – 18: 48 h Daphnia magna mg/l EC50 static 2: 48 h Daphnia magna mg/l LC50
Glycerol	2900 mg/l Microcystis aeruginosa	>5000 mg/l 24h Goldfish LC50	>10000 mg/L 24h Daphnia magna

12.3 BIOACCUMULATION POTENTIAL

No data available

Chemical name	log Kow
Formaldehyde	0.35
Glycerol	-1.76

13 – WASTE DISPOSAL

Dispose of waste from residues/ unused products	dispose in accordance with local regulations
contaminated packaging	for recycling or disposal carry empty containers to an approved waste disposal plant

14 – TRANSPORT

- In closed packaging
- No special precautions necessary

15 – REGULATORY INFORMATION

- Harmful
 - Substances which can cause dangers of a limited severity by inhalation, ingestion or skin penetration

16 – FURTHER INFORMATION

Full text of H-phrases

H302 – Harmful if swallowed
H312 – Harmful in contact with skin
H315 – Causes skin irritation
H317 – May cause an allergic skin reaction
H319 – Causes serious eye irritation
H332 – Harmful if inhaled
H335 – May cause respiratory irritation
H413 – May cause long-lasting harmful effects to aquatic life

Full text of P-phrases

P202 – Do not handle until all safety precautions have been read and understood
P211 – Do not spray on an open flame or other ignition source
P261 – Avoid breathing dust / fumes / gas / mist / vapours / sprays
P262 – Do not get in eyes, on skin or on clothing
P270 – Do not eat, drink or smoke when using this product
P273 – Avoid release to the environment
P280 – Wear protective gloves / protective clothing / eye protection / face protection
P301+330+351 – IF SWALLOWED: Rinse mouth / Rinse cautiously with water for several minutes
P302+351 – IF ON SKIN: Rinse cautiously with water for several minutes
P304+312+340 – IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell / Remove person to fresh air and keep comfortable for breathing
P305+351+338 – IF IN EYES: Rinse cautiously with water for several minutes / Remove contact lenses if present and easy to do. Continue rinsing
P412 – Do not expose to temperatures exceeding 50 °C / 122 °F

- ACGIH
 - American Conference of Governmental and Industrial Hygienists
- MAK
 - Maximal erlaubte Konzentration in der Luft am Arbeitsplatz (Deutsche Verordnung)
- TLV-CL
 - Grenzwert (threshold limit value)