

GreenFix Gernal fixative, ready to use

Safety Data Sheet dated 5/2/2014, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: GreenFix Gernal fixative, ready to use

trade code: P0116-7-8-H0185

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

Recommended use:

Reagent for Anatomy Pathology

Uses advised against:

not any

1.3. Details of the supplier of the safety data sheet

Company:

DIAPATH SpA - Via Savoldini , 71 - 24057 Martinengo (BG) -ITALY

DIAPATH SpA - phone +(39) 0363/986411 (8.30-17.30)

Competent person responsible for the safety data sheet:

msds@diapath.com

1.4. Emergency telephone number

Centro Antiveleni - Ospedale di Niguarda - Milano - Tel. +39 02/66101029

Centro Antiveleni - Osp. Maggiore - Unità operativa di Tossicologia - Bologna - Tel. +39 051/382984235

Centro Antiveleni - Università di Roma, Policlinico Umberto I - Tel.+39 06/490663

Centro Antiveleno - Università di Torino - Tel. +39 011/637637

Centro Antiveleni - Ospedali Riuniti Cardarelli (c/o Usl 40) - Napoli - Tel. +39 081/5453333

Centro Antiveleni - Unità degli Studi di Messina (c/o Facoltà di Farmacia) - Tel. 090/6764059

Centro Antiveleni - Centro di Rianimazione e Terapia Intensiva, Osp. Generale Regionale

Centro Antiveleni - Istituto per l'Infanzia - Trieste - Tel. +39 040/3785373

SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols:

Mutagenic category 3

 F Highly flammable

 Xi Irritant

R Phrases:

R11 Highly flammable.

R43 May cause sensitization by skin contact.

R68 Possible risk of irreversible effects.

EC regulation criteria 1272/2008 (CLP):

Flam. Liq. 2, H225 Highly flammable liquid and vapour.

Skin Sens. 1, H317 May cause an allergic skin reaction.

Muta. 2, H341 Suspected of causing genetic defects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Symbols:

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Danger

Hazard statements:

- H225 Highly flammable liquid and vapour.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.

Precautionary statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.
- P370+P378 In case of fire: Use ... For extinction.

Special Provisions:

None

Contents:

glyoxal...%; ethandial...%

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

>= 15% - < 20% ethanol; ethyl alcohol

Index number: 603-002-00-5, CAS: 64-17-5, EC: 200-578-6
F; R11; substance with a Community workplace exposure limit
Flam. Liq. 2 H225 Highly flammable liquid and vapour.

>= 1% - < 3% glyoxal...%; ethandial...%

Index number: 605-016-00-7, CAS: 107-22-2, EC: 203-474-9
Muta. Cat. 3,Xn,Xi; R20-36/38-43-68
Muta. 2 H341 Suspected of causing genetic defects.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1, 1A, 1B H317 May cause an allergic skin reaction.
Acute Tox. 4 H332 Harmful if inhaled.

>= 0.25% - < 0.5% methanol

Index number: 603-001-00-X, CAS: 67-56-1, EC: 200-659-6
F,T; R11-23/24/25-39/23/24/25
Flam. Liq. 2 H225 Highly flammable liquid and vapour.
STOT SE 1 H370 Causes damage to organs.
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.

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SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

None

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

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- Wash with plenty of water.
6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
Always keep the containers tightly closed.
Always keep in a well ventilated place.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Cool and adequately ventilated.
- 7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
ethanol; ethyl alcohol - CAS: 64-17-5
TLV/TWA - LTE: 180 mg/m³, 1000 ppm
glyoxal...%; ethandial...% - CAS: 107-22-2
TLV TWA - mg/m³ 0,1 SEN A4
TLV STEL - SEN A4
methanol - CAS: 67-56-1
TRGS 900 - LTE: 270 mg/m³, 200 ppm - Notes: categoria: 4(II)
TLV/TWA - LTE(8h): 260 mg/m³, 200 ppm
- DNEL Exposure Limit Values
ethanol; ethyl alcohol - CAS: 64-17-5
Worker Industry: 1900 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
Worker Industry: 950 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Industry: 343 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
- PNEC Exposure Limit Values
ethanol; ethyl alcohol - CAS: 64-17-5
Target: Fresh Water - Value: 0.96 mg/l
Target: Marine water - Value: 0.79 mg/l
Target: soil - Value: 0.63 mg/kg
Target: Marine water sediments - Value: 2.9 mg/kg
Target: Freshwater sediments - Value: 3.6 mg/kg
- 8.2. Exposure controls
Eye protection:
Use close fitting safety goggles, don't use eye lens.

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Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour:	liquid colorless	
Odour:	characteristic	
Odour threshold:	N.A.	
pH:	<5.0	
Melting point / freezing point:	N.A.	
Initial boiling point and boiling range:	N.A.	
Solid/gas flammability:	N.A.	
Upper/lower flammability or explosive limits:	N.A.	
Vapour density:	N.A.	
Flash point:	N.A.	
Evaporation rate:	N.A.	
Vapour pressure:	N.A.	
Relative density:	N.A.	
Solubility in water:	N.A.	
Solubility in oil:	N.A.	
Partition coefficient (n-octanol/water):	N.A.	
Auto-ignition temperature:	N.A.	
Decomposition temperature:	N.A.	
Viscosity:	N.A.	
Explosive properties:	N.A.	
Oxidizing properties:	N.A.	

9.2. Other information

Miscibility:	N.A.	
Fat Solubility:	N.A.	
Conductivity:	N.A.	
Substance Groups relevant properties	N.A.	

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth), nitrides, and powerful reducing agents.

It may catch fire on contact with oxidising mineral acids, elementary metals (alkalis and alkaline earth), nitrides, organic peroxides and hydroperoxides, oxidising agents, and reducing agents.

10.4. Conditions to avoid

Stable under normal conditions.

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10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

ethanol; ethyl alcohol - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 7060 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 20 g/kg

Test: LC50 - Route: Inhalation - Species: Rat = 20000 Ppm - Duration: 8h

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin Positive

c) serious eye damage/irritation:

Test: Eye Corrosive - Route: Skin Positive

d) respiratory or skin sensitisation:

Test: Respiratory Tract Corrosive - Route: Inhalation Positive

methanol - CAS: 67-56-1

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Man = 64 g/kg

Test: LD50 - Route: Oral - Species: Rat = 5628 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 15.8 g/kg

d) respiratory or skin sensitisation:

Test: Skin Irritant - Route: Skin Positive

Mutagenic category 3

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.:

a) acute toxicity;

b) skin corrosion/irritation;

c) serious eye damage/irritation;

d) respiratory or skin sensitisation;

e) germ cell mutagenicity;

f) carcinogenicity;

g) reproductive toxicity;

h) STOT-single exposure;

i) STOT-repeated exposure;

j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

ethanol; ethyl alcohol - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: salmo gairdneri = 13 g/l - Duration h: 96

Endpoint: LC50 - Species: pimephales promelas = 13.5 g/l

Endpoint: EC50 - Species: Daphnia = 12.34 g/l - Duration h: 48

Endpoint: NOEC - Species: Daphnia > 10 mg/l - Notes: riproduzione (21 giorni)

Endpoint: EC50 - Species: artemia salina > 10 g/l - Duration h: 24

Endpoint: EC50 - Species: chlorella vulgaris = 275 mg/l - Duration h: 72

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- Endpoint: EC10 - Species: chlorella vulgaris = 11.5 mg/l - Duration h: 72
 Endpoint: EC50 - Species: selenastrum capricornutum = 12.9 g/l - Duration h: 72
 Endpoint: EC10 - Species: selenastrum capricornutum = 0.44 g/l - Duration h: 72
 methanol - CAS: 67-56-1
 a) Aquatic acute toxicity:
 Endpoint: EC50 - Species: daphnia magna = 24500 mg/l - Duration h: 48
 Endpoint: EC50 - Species: Algae = 8000 mg/l - Duration h: 72
 Endpoint: LC50 - Species: Fish = 10800 mg/l - Duration h: 96
- 12.2. Persistence and degradability
 None
 ethanol; ethyl alcohol - CAS: 64-17-5
 Biodegradability: Readily biodegradable - Test: N.A. - Duration: N.A. - %: N.A. - Notes: N.A.
- 12.3. Bioaccumulative potential
 ethanol; ethyl alcohol - CAS: 64-17-5
 Bioaccumulation: Not bioaccumulative - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.
- 12.4. Mobility in soil
 ethanol; ethyl alcohol - CAS: 64-17-5
 Mobility in soil: evaporates quickly - Test: N.A. N.A. - Duration: N.A. - Notes: N.A.
- 12.5. Results of PBT and vPvB assessment
 vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
 None

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
 Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



- 14.1. UN number
 ADR-UN Number: 1993
 IATA-UN Number: 1993
 IMDG-UN Number: 1993
- 14.2. UN proper shipping name
 ADR-Shipping Name: FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa) (ethanol; ethyl alcohol, methanol)
 IATA-Shipping Name: FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa) (ethanol; ethyl alcohol, methanol)
 IMDG-Shipping Name: FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa) (ethanol; ethyl alcohol, methanol)
- 14.3. Transport hazard class(es)
 ADR-Class: 3
 ADR - Hazard identification number: 33
 IATA-Class: 3
 IATA-Label: 3
 IMDG-Class: 3

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- 14.4. Packing group
 ADR-Packing Group: II
 IATA-Packing group: II
 IMDG-Packing group: II
- 14.5. Environmental hazards
 ADR-Enviromental Pollutant: No
 IMDG-Marine pollutant: No
- 14.6. Special precautions for user
 ADR-Subsidiary risks: -
 ADR-S.P.: 274 601 640C
 ADR-Tunnel Restriction Code: (D/E)
 IATA-Passenger Aircraft: 353
 IATA-Subsidiary risks: -
 IATA-Cargo Aircraft: 364
 IATA-S.P.: A3
 IATA-ERG: 3H
 IMDG-EmS: F-E , S-E
 IMDG-Subsidiary risks: -
 IMDG-Storage category: Category B
 IMDG-Storage notes: -
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
 N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
 Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
 Dir. 98/24/EC (Risks related to chemical agents at work)
 Dir. 2000/39/EC (Occupational exposure limit values)
 Dir. 2006/8/EC
 Regulation (EC) n. 1907/2006 (REACH)
 Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) n. 453/2010 (Annex I)
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
 Restriction 3
- Where applicable, refer to the following regulatory provisions :
 Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.
 Regulation (EC) nr 648/2004 (detergents).
 1999/13/EC (VOC directive)
- 15.2. Chemical safety assessment
 No

SECTION 16: Other information

- Text of phrases referred to under heading 3:
 R11 Highly flammable.
 R20 Harmful by inhalation.
 R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

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R36/38 Irritating to eyes and skin.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R43 May cause sensitization by skin contact.

R68 Possible risk of irreversible effects.

H225 Highly flammable liquid and vapour.

H341 Suspected of causing genetic defects.

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H370 Causes damage to organs.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

CCNL - Appendix 1

Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods

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	by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.