

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

1.1 Product identifier

Trade name/designation MAST ISOPLEX DNA / RNA Extraction Proteinase K

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

Relevant identified uses

remark

The product is intended for research, analysis and scientific education.

The product is intended for professional use.

It is not required to list the identified uses because the substance is not subject to registration according to REACH (< 1 t/a).

Sector of uses [SU]

SU24 Scientific research and development

SU20 Health services

Product categories [PC]

PC21 Laboratory chemicals

Process categories [PROC]

PROC15 Use as laboratory reagent

Article categories [AC]

AC0 Other Articles:

1.3 Details of the supplier of the safety data sheet

Manufacturer

Mast Diagnostica GmbH

Feldstrasse 20

Deutschland-23858 Reinfeld

Telephone: +49 4533 2007 0

Telefax: +49 4533 2007 68

E-mail: mast@mast-diagnostica.de

www.mast-group.com

1.4 Emergency telephone number

Only available during office hours.

Poison Information Centre / Gift Notrufzentrale

Mathildenstraße 1, 79106 Freiburg, Germany / Deutschland

Phone: +49 761 19240 / Fax: +49 761 270 44 570

E-Mail: giftinfo@uniklinik-freiburg.de / Web: www.giftberatung.de

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

health hazards

Acute Tox. 4

hazard statements for health hazards

H302 Harmful if swallowed.

health hazards

Acute Tox. 4

hazard statements for health hazards

H312 Harmful in contact with skin.

health hazards

Acute Tox. 4

hazard statements for health hazards

H332 Harmful if inhaled.

health hazards

Skin Corr. 1C

hazard statements for health hazards

H314 Causes severe skin burns and eye damage.

Environmental hazards

Aquatic Chronic 3

hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

Classification according to Directive 67/548/EEC or 1999/45/EC

Additional information

This mixture does not contain any substances which either present a health or environmental hazard according to Regulation (EC) No. 1272/2008 or have an occupational exposure limit assigned.

2.2 Label elements

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

Hazard components for labelling

Substance name
guanidinium thiocyanate

Hazard pictograms



GHS05



GHS07

Signal word

Danger

Hazard statements

hazard statements for health hazards

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

Hazard statements for environmental hazards:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

General:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+ P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/or shower.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to .

Special rules on packaging

Child-resistant fastenings (EN/862/ISO 8317). Tactile warning according to EN/ISO 11683.

Other labelling

Standard phrases for safety precautions for the protection of humans or the environment

General rules

Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

Safety precautions for operators (SPo)

General rules

2.3 Other hazards

Adverse human health effects and symptoms

Frequently or prolonged contact with skin may cause dermal irritation. Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

SECTION 3: Composition / information on ingredients

remark

Full text of R-, H- and EUH-phrases: see section 16. Full text of H- and EUH-statements: see section 16.

3.1/3.2 Substances/Mixtures

Hazardous ingredients

Proteinase	>=50 - <=100 %
CAS 39450-01-6	
EC 254-457-8	
Acute Tox. 4, H302 / Acute Tox. 4, H312 / Acute Tox. 4, H332 / Skin	
Corr. 1C, H314 / Aquatic Chronic 3, H412	

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Do not leave affected person unattended. Remove victim out of the danger area.

Following inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, wash immediately with plenty of water and soap. In case of skin reactions, consult a physician.

After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Self-protection of the first aider

none

4.2 Most important symptoms and effects, both acute and delayed

If decomposition products are inhaled the following symptoms can occur:

none

Effects

This information is not available.

Symptoms

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor

No data available

Special treatment

No data available

SECTION 5: Firefighting measures

Additional information

Move undamaged containers from immediate hazard area if it can be done safely. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Remove product from area of fire.

5.1 Extinguishing media

Suitable extinguishing media

alcohol resistant foam

Water mist

Carbon dioxide (CO₂)

Extinguishing powder

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated:

5.3 Advice for firefighters

Special protective equipment for firefighters

Use suitable breathing apparatus. protective clothing.

SECTION 6: Accidental release measures

Additional information

Clear spills immediately.

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures

Provide adequate ventilation.

Personal precautions

Use personal protection equipment.

Protective equipment

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

For emergency responders

Personal protection equipment

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

For containment

Suitable material for taking up:

Absorbing material, organic

Water (with cleaning agent)

For cleaning up

Suitable material for diluting or neutralizing:

Water

Other information

Section 7 Information zur sicheren Handhabung / information on safe handling
none

6.4 Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. Remove contaminated, saturated clothing immediately. Wash contaminated clothing prior to re-use. Wash hands before breaks and after work.

Make available sufficient washing facilities

Provide eye shower and label its location conspicuously

Protective measures

Advices on safe handling

Inhalation

Inhalation of dust/particles

Skin contact

Eye contact

7.2 Conditions for safe storage, including any incompatibilities

Regulation on Flammable Liquids - VbF

remark

none

Technical measures and storage conditions

none

Packaging materials:

none

Requirements for storage rooms and vessels

The floor should be leak tight, jointless and not absorbent. Keep/Store only in original container. Keep container tightly closed. Store in a place accessible by authorized persons only.

Further information on storage conditions

Protect containers against damage.

7.3 Specific end use(s)

Recommendation

Observe technical data sheet. Observe instructions for use.

Industrial sector specific solutions

none

SECTION 8: Exposure controls/personal protection

Additional information

Observe the expiry date.

8.1 Control parameters

Exposure limits at intended use

biological limit values

remark

none

not relevant

air limit values

remark

not relevant

Recommended monitoring procedures:

none

8.2 Exposure controls

Appropriate engineering controls

Structural measures to prevent exposure

none

Organisational measures to prevent exposure

Phrase ID -1 Übersetzung (ISO-Code: en) nicht gefunden!!

none

Substance/mixture related measures to prevent exposure during identified uses

none

Technical measures to prevent exposure

none

Personal protection equipment

Eye/face protection

Suitable eye protection:

Eye glasses with side protection

Skin protection

Suitable gloves type:

Disposable gloves

Body protection:

Suitable protective clothing:

lab coat

Environmental exposure controls

Instructional measures to prevent exposure

none

Organisational measures to prevent exposure

none

Substance/mixture related measures to prevent exposure during identified uses

none

Technical measures to prevent exposure

none

Consumer exposure controls

Measures related to consumer uses of the substance (as such or in preparations).

none

Measures related to the service life of the substance in articles

none

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state

solid

Colour

white

Odour

odourless

Odour threshold:

not determined

		parameter	Method - source - remark
pH	6,5 - =6,5		in aqueous solution not determined
Melting point/freezing point			not determined
Initial boiling point and boiling range			not determined
Flash point (°C)	<21 - <=21 °C		literature value not applicable
Evaporation rate			not applicable
flammability	=425 - =425		Highly flammable liquid and vapour (H225).
Upper explosion limit	15 - =15 Vol-%		not applicable
lower explosion limit	3,5 - 3,5 Vol-%		not determined
Vapour pressure	59 - =59 hPa	Temperature =20 - =20 °C	
Vapour density			not applicable
Relative density			not applicable
Fat solubility (g/L)			not determined
Water solubility (g/L)			very soluble
Soluble (g/L) in			very soluble miscible
Partition coefficient: n-octanol/water			not determined
Auto-ignition temperature			not applicable
Decomposition temperature			not determined
Dynamic viscosity			not relevant
flow time			not relevant
Kinematic viscosity			not relevant
Thermal sensitivity			not sensitive to impact using an impact energy of 40 J not sensitive to friction using a friction load of 360 N not relevant
Sensitiveness to impact (J)			negative, no explosion
Sensitiveness to friction (N)			not sensitive to impact using an impact energy of 40 J not sensitive to friction using a friction load of 360 N not relevant
Oxidising liquids			not relevant

parameter	Method - source - remark
Oxidising solids	not relevant
Oxidising gases	not relevant

9.2 Other information

Physical hazards

Explosives

Justification for data waiving

The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

Assessment/classification

No ignition, explosion, self-heating or visible decomposition.

Flammable gases

Justification for data waiving

not applicable

not relevant

Assessment/classification

Non-flammable.

Flammable aerosols

Justification for data waiving

Testing can be waived because substance is not an aerosol.

Assessment/classification

Not classified as flammable aerosol.

Oxidising gases

Justification for data waiving

Testing can be waived because substance is a liquid.

Assessment/classification

Not oxidising.

Gases under pressure

Justification for data waiving

Testing can be waived because substance is a liquid.

Assessment/classification

not applicable

not relevant

flammable liquids

Justification for data waiving

not applicable

not relevant

Assessment/classification

not applicable

not relevant

Flammable solids

Justification for data waiving

Testing can be waived because substance is a liquid.

Assessment/classification

not applicable

not relevant

Self-reactive substances and mixtures

Justification for data waiving

not applicable
not relevant

Assessment/classification

not applicable
not relevant

Pyrophoric liquids

Justification for data waiving

not applicable
not relevant

Assessment/classification

not applicable
not relevant

Pyrophoric solids

Justification for data waiving

not applicable
not relevant

Assessment/classification

not relevant
not applicable
Not pyrophoric.

self-heating substances and mixtures

Justification for data waiving

not applicable
not relevant

Assessment/classification

not applicable
not relevant

Substances or mixtures which, in contact with water, emit flammable gases

Justification for data waiving

not applicable
not relevant

Assessment/classification

not applicable
not relevant

Oxidising liquids

Justification for data waiving

not applicable
not relevant

Assessment/classification

not applicable
not relevant

Oxidising solids

Justification for data waiving

not applicable
not relevant

Assessment/classification

Not oxidising. Not oxidising.

Organic peroxides and self-reactive substances

Justification for data waiving

Classification procedure not required, because the substance or the mixture is by definition not an organic peroxide.

Assessment/classification

not applicable

not relevant

Corrosive to metals

Justification for data waiving

not relevant

not applicable

Assessment/classification

not applicable

not relevant

Properties of explosive atmospheres (Gases/vapours)

Temperature class

remark

not applicable

not relevant

none

Maximum experimental safe gap (MESG)

remark

not applicable

not relevant

none

Explosion group

remark

not applicable

not relevant

none

Minimum ignition current (MIC)

remark

not applicable

not relevant

none

Minimum ignition energy (MIE)

remark

not relevant

not applicable

none

Maximum explosion pressure (Pmax)

remark

none

not applicable

not relevant

Maximum rate of pressure rise ((dp/dt)max)

remark

not applicable

not relevant

Basic test for hazard evaluation of dusts

particle size distribution (median value)

evaluation

none
not applicable
not relevant

remark

none
not applicable
not relevant

Moisture content (quantitative determination of water content)

evaluation

not applicable
not relevant

remark

none
not applicable

Dust explosibility

evaluation

none
not applicable

remark

not applicable
not relevant
none

lower explosion limit

evaluation

not applicable
not relevant
none

source

not applicable
none

Maximum rate of pressure rise and KSt-value respectively

evaluation

none
not applicable

remark

none
not applicable
not relevant

Limiting oxygen concentration

evaluation

not applicable
not relevant

remark

none
not applicable

Minimum ignition temperature of a dust cloud

evaluation

not applicable
not relevant

remark

none
not applicable

Flammability and burning behaviour of dust layers: burning number (BZ)

evaluation

none
not applicable

remark

none
not applicable
not relevant

Minimum ignition temperature of a 5 mm dust layer (glowing temperature)

evaluation

not applicable
not relevant

remark

none
not applicable
not relevant

Smoldering point

evaluation

none
not applicable
not relevant

remark

none
not applicable
not relevant

Gel permeation chromatography (GPC)

Low molecular weight content of polymers (Dalton):

remark

none
not applicable
not relevant

Number-average molecular weight (Mn)

remark

not applicable
not relevant

Number-average molecular weight (Mn)

remark

not applicable
not relevant

Solution/extraction behaviour of polymers in water

remark

not applicable
not relevant

Weight-average molecular weight (Mw):

remark

not applicable
not relevant

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

not applicable
not determined
not relevant

10.5 Incompatible materials

Materials to avoid

not applicable
not determined
not relevant

10.6 Hazardous decomposition products

not applicable
not relevant

Additional information

not applicable
No data available

SECTION 11: Toxicological information

Additional information

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

Toxicokinetics, metabolism and distribution

Non-human toxikological data

remark

No information available.

11.1 Information on toxicological effects

Aspiration hazard

remark

data lacking

Acute toxicity

Other information

not determined

Acute dermal toxicity

remark

data lacking

Acute inhalation toxicity (dust/mist)

Symptoms / delayed effects

The inhalation of dust/mist or aerosols causes irritation of the respiratory tract.

skin corrosion/irritation

Acid-/Alkali reserve (buffer capacity for mixtures with extreme pH values)

In vitro skin test

Result

strongly irritant.

Respiratory or skin sensitisation

Sensitisation to the respiratory tract

Assessment/classification

May cause sensitization by inhalation and skin contact. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Practical experience/human evidence

ingredient

Practical experience/human evidence

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Carcinogenicity

remark

Longterm experiments do not indicate carcinogenic effects.

Reproductive toxicity

Practical experience/human evidence

No indications of human reproductive toxicity exist.

Assessment/classification

Based on available data, the classification criteria are not met.

STOT-single exposure

STOT SE 1 and 2

Dermal specific target organ toxicity (single exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Inhalative specific target organ toxicity (single exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Oral specific target organ toxicity (single exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

STOT SE 3

Irritation to respiratory tract

Assessment/classification

May cause respiratory irritation.

Repeated dose toxicity (subacute, subchronic, chronic)

Subacute oral toxicity

remark

data lacking

Subacute dermal toxicity

remark

data lacking

Subacute inhalation toxicity

remark
data lacking

STOT-repeated exposure

STOT RE 1 and 2

Dermal specific target organ toxicity (repeated exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Inhalative specific target organ toxicity (repeated exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Oral specific target organ toxicity (repeated exposure)

Assessment/classification

The classification criteria for this hazard class are not met by definition.

Other adverse effects

Phototoxicity

In vitro phototoxicity

remark
data lacking

In vivo phototoxicity

remark
data lacking

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

remark
No data available

Acute (short-term) toxicity to crustacea

remark
No data available

Chronic (long-term) toxicity to crustacea

remark
No data available

Chronic (long-term) fish toxicity

remark
No data available

Acute (short-term) toxicity to aquatic algae and cyanobacteria

remark
No data available

Chronic (long-term) algae toxicity

remark
No data available

Toxicity to other aquatic plants/organisms

remark
No data available

Toxicity to microorganisms

remark

No data available

Sediment toxicity

Effects on soil microorganisms

remark

No data available

Toxicity to soil macroorganisms

Acute earthworm toxicity

remark

No data available

not applicable

Chronical earthworm toxicity (reproduction)

remark

No data available

not applicable

Long-term toxicity of organisms living in the sediment

remark

No data available

not applicable

Terrestrial toxicity

Toxicity to terrestrial arthropods

Useful insect toxicity

remark

not applicable

No data available

Toxicity to terrestrial plants

Acute plant toxicity

remark

not applicable

No data available

Toxicity to birds

Acute and subchronic bird toxicity

remark

not applicable

No data available

Bird reproduction toxicity

remark

No data available

not applicable

Additional ecotoxicological information

Dissolved organic carbon (DOC):

remark

not applicable

Theoretical oxygen demand (ThOD):

remark

not applicable

Theoretical carbon dioxide amount (ThCO₂):

remark

not applicable

Chemical oxygen demand (COD)

remark

not applicable

Biochemical oxygen demand

remark

not applicable

BOD₅/COD ratio:

remark

not applicable

Total organic carbon (TOC):

remark

not applicable

inorganic carbon (IC)

remark

not applicable

AOX

remark

not applicable

No data available

POX

remark

not applicable

No data available

EOX

remark

No data available

not applicable

Additional information

The product has not been tested.

12.2 Persistence and degradability

Abiotic degradation

remark

not applicable

No data available

Biodegradation

remark

not applicable

No data available

Assessment/classification

No data available

not applicable

12.3 Bioaccumulative potential

Assessment/classification

No indication of bioaccumulation potential. Water hazard class 1 (German Regulation), do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

12.4 Mobility in soil

Assessment/classification

not applicable

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Other adverse effects

Atmospheric lifetime:

remark

not applicable

No data available

Endocrine disrupting potential:

remark

not applicable

No data available

Global warming potential (GWP)

remark

not applicable

No data available

Ozone depletion potential (ODP):

remark

No data available

not applicable

Photochemical ozone creation potential (POCP):

remark

not applicable

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Non-contaminated packages must be recycled or disposed of.

Appropriate disposal / Package

Delivery to an approved waste disposal company. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste code packaging 180000

hazardous waste No

Waste name

WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)

Waste code product 180000

hazardous waste No

Waste name

WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)

Waste code product 180200

hazardous waste No

Waste name

wastes from research, diagnosis, treatment or prevention of disease involving animals

Waste code product 180203

hazardous waste No

Waste name

wastes whose collection and disposal is not subject to special requirements in order to prevent infection

remark

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN-No.	1760	1760	1760
14.2 Proper Shipping Name	CORROSIVE LIQUID, N.O.S. CORROSIVE LIQUID, N.O.S. Corrosive liquid, n.o.s.		
14.3 Class(es)	8	8	8
14.4 Packing group	I	I	I
14.5 ENVIRONMENTALLY HAZARDOUS	No	No	No
14.6 Special precautions for user	not applicable	not applicable	not applicable
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not applicable	not applicablenot relevant	not applicable

Additional information - Land transport (ADR/RID)

Hazard label(s)	8
Classification code	C9
Limited quantity (LQ)	0
Hazard identification number (Kemler No.)	88
tunnel restriction code	E
transport category	1

remark

Not classified for this transport way. This product is part of a kit. Information in this section refers to the kit as a whole.

Additional information - Sea transport (IMDG)

Marine pollutant	No
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remark

Not classified for this transport way.

Additional information - Air transport (ICAO-TI / IATA-DGR)

Limited quantity (LQ)	0
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remark

Not classified for this transport way. This product is part of a kit. Information in this section refers to the kit as a whole.

Special precautions for user

none

Additional information
All transport carriers

No dangerous good in sense of these transport regulations. This product is part of a kit. Information in this section refers to the kit as a whole.

SECTION 15: Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment is not required.

SECTION 16: Other information

Abbreviations and acronyms

See overview table at www.euphrac.eu

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

See SECTION 2.1 (classification).

Indication of changes

none

Additional information

Information concerning special preventive measures on bulk ware are available on demand. During mixing, observe all labels and safety data sheets of all the components.

Single pack

Notice the directions for use on the label. Data relies on practical experience.

Relevant R-, H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Key literature references and sources for data

www.esdb.eu

Training advice

Special training for first aid necessary.