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# Geratherm®

Medical Diagnostic System s

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Tele-medical solutions

Safety Data Sheet acc

Key technology  
Galinstan

You can also download the pdf-file.

Areas of application

Safety Data Sheet acc, to Guideline 93/112/EC

Thermometers

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dtd, 11 March 1998

Products/  
tele-medical solutions

1. Identification of the substance/preparation and company

Trade name:  
Galinstan fluid  
Geratherm Medical AG  
Fahrenheitstrasse 1  
D-98716 Geschwenda  
Telephone: 036205/980  
Fax: 036205/98-115 / 98-1116

In emergency,  
information can be  
obtained from:

Laboratory: Telephone: 036205/98-230

## 2. Composition / Information on constituents

Eutectic mixture of the metal components gallium, indium and tin

## 3. Potential hazards

Description of the hazard: Corrosive  
Special hints concerning hazards for the human and environment: So far as the  
usual regulations of industrial hygiene are adhered to, the product handling  
does not involve any appreciable risk. Neither involves the product any risk of  
fire or explosion.

## 4. First aid measures

General: Any general instruction are not necessary.  
Inhalation: Inhalation does not involve any possibility of exposure.  
If the product has come into contact with the skin: Wash down the skin area with water and soap.



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If the product has come into contact with the eyes: Rinse the eyes with lukewarm water, with eyelid opened.

If the product was swallowed up: Keep cool. Consult a physician and present him this Safety Data Sheet.

Instruction for the physician: Any specific measures to be taken are not known. Carry out a symptomatic therapy.

#### 5. Fire-fighting measuring

Not applicable because the product is not inflammable.

#### 6. Measures to be taken in case of unintentional release

Personal precautionary measures: Potential risk of slipping on spilled / leaked out product.

Cleaning/picking-up method: Suck or sweep up any large quantities of product and feed them to recovery in plastic containers. Remove any product residues from surfaces by means of surfactant/water solution.

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#### 7. Handling and storage

Handling: Hints for safety handling: Avoid any spilling. Avoid the unnecessary contact with the chemicals. When Gallinstan fluid is handled in unpacked condition, its quality and degree of purity may be impaired. TWG disclaims any liability for impairments of the product quality caused by processing operations.

Storage: Store the product in the original container in dry, cool places protected from frost. If not used, keep the container closed. The plastic used as container materials are resistant (e.g. PE, PP).

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**8. Exposure control and personal protective equipment**

General protective and hygienic measures: Wash your hands after the work and before the breaks. Observe the rules of industrial hygiene.

Respiratory protection: In emergency cases and occurring oxide smoke, use he filter apparatus and filter P3.

Hand protection: Wear rubber protective gloves to avoid a repeated or permanent contact with the skin. If necessary, use a refitting skin protective cream.

Eye protection: Wear protective goggles in case of potential contact with the eyes, e.g. by splashing.

Body protection: Wear suitable work clothing if there is a risk of splashing in case of potential contact with the body.

**9. Physical and chemical properties****Appearance**

Shape: Liquid metal alloy

Colour: Silvery

Odour: Odourless

Safety data Value/Range

Change of state > 1300

Boiling point: °C

Melting point: - 20 °C

Flash point: None

Inflammability: Not applicable

Explosion hazard: Not applicable

Self-ignition: Not applicable

Fire-promoting properties: None

Vapour pressure: <10-8 Torr at 500 °C

Density: 6,44 g/cm<sup>3</sup>

Solubility in water: Insoluble

Solubility in organic solvents: Insoluble

pH value: Not applicable

Viscosity: 0,0024 NS/m at 20°C

Other data:

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#### **10. Stability and reactivity**

Conditions to be avoided: Exothermic reactions can be expected if the product comes into contact with aluminium and water is subsequently added.

Substances to be avoided: Chlorine, bromine, metals, light metal alloys, aluminium (amalgam formation).

Hazardous decomposition products: None, if the product is properly used.

Other Information:

The product has an alloying effect on metal surfaces such as copper, tin, lead, zinc, gold and silver jewellery, above all, if such surfaces are pure and free from oxides. If necessary, the product should be tested under the specific conditions of application to determine any reactions with materials and chemical substances.

#### **11. Toxicological information**

Acute toxicity: The preparation itself has not been tested.

Assessment based on the raw materials: Based on the available data materials concerning the toxicity of the single components, the quantities which would come to effect are below the limits of acute toxicity even if a full resorption is assumed.

Experience gained in practice: Effects on the human

So far as the product was properly handled and the generally applicable regulations of industrial hygiene were adhered to, any harmful effect on the health has not become known.

Inhalation: The risk of toxication is negligible due to the extremely low vapour pressure.

Swallowing-up: The product is discharged via the natural ways.

Skin: Some skin defatting is possible in case of continuous or repeated contact with the skin.

Eyes: Splashes got into the eyes may cause irritations. It is advisable to wear protective goggles.

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## 12. Ecological information

**General instructions:** The product is not miscible with water and shows a tendency toward sedimentation.

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## 13. Instruction for disposal

**Product**

**Recommendation:** The use of the product for the purpose intended should be given preference over the disposal. If recycling is not possible, the product should be disposed according to the locally valid laws on waste disposal and regulations (the competent authorities are responsible to give the necessary information).

**Cleansing agent recommended:** 2% hydrochloric acid heated to approx. 60°C. surfactant/water solution for surfaces.  
**Note:** Fully emptied and cleaned packages can be as valuable materials.

## 14. Transport information

**Road/Rail:** 1760 Corrosive liquid, n.o.s. (Gallium solution)  
Cl. 8, 66 c ADR/RID

**Air transport:** As of: September 1996

LATA Corrosive liquid, n.o.s. (Gallium solution)  
Class 8, UN 1760  
Packing Group III  
37th ed., 1 Jan. 1996


**Marine transport:** Corrosive liquids, n.o.s. (Gallium Solution)  
UN 1760, page 8147, III  
EMS 8-12, MFAAG 760  
As of: September 1996

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**15. Regulatory information**

The above-mentioned product is no hazardous substance within the meaning of the Decree on Dangerous Substances.

**16. Other data**

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