

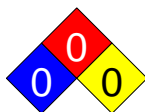
## 1 Identification

- **Product identifier**
- **Trade name:** Hanks' balanced salts (HBSS) with 1.0 g/L D(+)-Glucose, w/o Phenol red
- **Article number:** A3140
- **Application of the substance / the mixture**  
 Cell culture  
 Laboratory chemical
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 AppliChem GmbH  
 Ottoweg 4  
 D-64291 Darmstadt
- **Information department:** Dept. Compliance
- **Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

Tel.: +49 (0)6151 93570  
 Fax.: +49 (0)6151 935711  
 msds@applichem.com

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Precautionary statements**  
 P262 Do not get in eyes, on skin, or on clothing.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
 Fire = 0  
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1  
 Fire = 0  
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:**  
 Mixture: consisting of the following components.

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• **Dangerous components:**

10035-04-8 Calcium chloride dihydrate BioChemica

>1-≤2.5%

#### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Wash off with plenty of water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water.  
Seek medical treatment.
- **After swallowing:**  
Rinse out mouth.  
If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Use fire fighting measures that suit the environment.  
In adaption to materials stored in the immediate neighbourhood.
- **Special hazards arising from the substance or mixture**  
Sulphur dioxide (SO<sub>2</sub>)  
Hydrogen chloride (HCl)  
CO, CO<sub>2</sub>  
Non-combustible.  
Ambient fire may liberate hazardous vapours.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Do not inhale dust.  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid generation of dusts.  
Clean up affected area.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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**· Protective Action Criteria for Chemicals**

**· PAC-1:**

10035-04-8	Calcium chloride dihydrate BioChemica	16 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	20 mg/m <sup>3</sup>
7778-77-0	Potassium di-Hydrogen Phosphate	9.6 mg/m <sup>3</sup>

**· PAC-2:**

10035-04-8	Calcium chloride dihydrate BioChemica	170 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	220 mg/m <sup>3</sup>
7778-77-0	Potassium di-Hydrogen Phosphate	110 mg/m <sup>3</sup>

**· PAC-3:**

10035-04-8	Calcium chloride dihydrate BioChemica	1,100 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	1,300 mg/m <sup>3</sup>
7778-77-0	Potassium di-Hydrogen Phosphate	630 mg/m <sup>3</sup>

**7 Handling and storage**

- Handling:**
- Precautions for safe handling** Provide suction extractors if dust is formed.
- Information about protection against explosions and fires:** The product is not flammable.
- Conditions for safe storage, including any incompatibilities**
- Storage:**
- Requirements to be met by storerooms and receptacles:** No special requirements.
- Information about storage in one common storage facility:** Not required.
- Further information about storage conditions:** Keep container sealed.
- Recommended storage temperature:** +15 - +25°C
- Storage class:** 11
- Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- Additional information about design of technical systems:** No further data; see item 7.
- Control parameters**
- Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:** The lists that were valid during the creation were used as basis.
- Exposure controls**
- Personal protective equipment:**
- General protective and hygienic measures:** Change contaminated clothing.
- Breathing equipment:**  
Required when dusts are generated.  
Filter P1
- Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\geq 480$  min
- **As protection from splashes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\geq 480$  min
- **Eye protection:** Safety glasses
- **Body protection:**  
Protective work clothing  
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## 9 Physical and chemical properties

### • Information on basic physical and chemical properties

#### • General Information

#### • Appearance:

Form:	Solid
Color:	Yellowish
Odor:	Characteristic
Odor threshold:	Not determined.

• pH-value: Not applicable.

#### • Change in condition

Melting point/Melting range:	n.a. °C
Boiling point/Boiling range:	Undetermined.

• Flash point: Not applicable.

• Flammability (solid, gaseous): Not determined.

• Ignition temperature: unbekannt °C

• Decomposition temperature: Not determined.

• Auto igniting: Product is not selfigniting.

• Danger of explosion: Product does not present an explosion hazard.

#### • Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

• Vapor pressure: Not applicable.

Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.

#### • Solubility in / Miscibility with

Water:	Soluble.
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• Partition coefficient (n-octanol/water): Not determined.

#### • Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

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Trade name: Hanks' balanced salts (HBSS) with 1.0 g/L D(+)-Glucose, w/o Phenol red

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- **Solvent content:**
- **VOC content:** 0.00 %
- **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No dangerous reactions known.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No dangerous reactions known.
- **Hazardous decomposition products:** In the event of fire: See chapter 5

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**  
Quantitative data on the toxicological effect of this product are not available.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow to enter waters, waste water, or soil.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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Trade name: Hanks' balanced salts (HBSS) with 1.0 g/L D(+)-Glucose, w/o Phenol red

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### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Chemicals must be disposed of in compliance with the respective national regulations.  
Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |  |                 |
|--|-----------------|
| • <b>UN-Number</b>   |                 |
| • <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| • <b>UN proper shipping name</b>   |                 |
| • <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void            |
| • <b>Transport hazard class(es)</b>  |                 |
| • <b>DOT, ADR, ADN, IMDG, IATA</b>   |                 |
| • <b>Class</b>   | Void            |
| • <b>Packing group</b>   |                 |
| • <b>DOT, ADR, IMDG, IATA</b>  | Void            |
| • <b>Environmental hazards:</b>  |                 |
| • <b>Marine pollutant:</b>   | No              |
| • <b>Special precautions for user</b>  | Not applicable. |
| • <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| • <b>UN "Model Regulation":</b>  | Void            |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

#### • **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

#### • **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

#### • **TSCA (Toxic Substances Control Act):**

7647-14-5	sodium chloride
50-99-7	glucose
7447-40-7	potassium chloride
7487-88-9	magnesium sulphate
7778-77-0	Potassium di-Hydrogen Phosphate
7558-79-4	di-Sodium Hydrogen Phosphate anhydrous

#### • **TSCA new (21st Century Act) (Substances not listed)**

10035-04-8	Calcium chloride dihydrate BioChemica
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**Trade name: Hanks' balanced salts (HBSS) with 1.0 g/L D(+)-Glucose, w/o Phenol red**

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• **Proposition 65**

• **Chemicals known to cause cancer:**

None of the ingredients is listed.

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

• **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

• **Carcinogen categories**

• **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

• **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

• **GHS label elements** Void

• **Hazard pictograms** Void

• **Signal word** Void

• **Hazard statements** Void

• **Precautionary statements**

P262 Do not get in eyes, on skin, or on clothing.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Department issuing SDS:** Dept. Compliance

• **Date of preparation / last revision** 12/31/2017 / 1

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

• **\* Data compared to the previous version altered.**