

# Gamborg B5 Medium (Micro and Macro elements incl. Vitamins)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 14/03/2012      Revision date 24/07/2018

**G0210**

Version: 2.0

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

#### 1.1. Product identifier

Product form : Mixture  
 Trade name : Gamborg B5 Medium  
 (Micro and Macro elements incl. Vitamins)  
 Product code : G0210  
 Product group : Raw material

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
 Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

Duchefa Biochemie B.V.  
 A. Hofmanweg 71  
 2031 BH Haarlem - The Netherlands  
 T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

#### 1.4. Emergency telephone number

Emergency number : Supplier contact information:  
 +31(0)23-5319093 (M-F 09:00-17:00)  
 +31(0)6-30109355 (outside office hours)

| Organisation/Company  | Address   | Comment                                   |
|---|---|---|
| World Health Organization world directory of poison centres | <a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a> | Consult website for a local poison centre |

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2 H315  
 Serious eye damage/eye irritation, Category 2 H319  
 Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P261 - Avoid breathing dust.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.

Extra phrases :

Based on research by TNO in Rijswijk (The Netherlands), commissioned by Duchefa Biochemie B.V. in Haarlem, the medium has no oxidising or explosive properties. As such the substance is not classified as oxidizing (H272, GHS03).

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                                      | Product identifier  | %     | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|-------|---|
| Potassium nitrate                         | (CAS-No.) 7757-79-1<br>(EC-No.) 231-818-8                                 | 79,01 | Ox. Sol. 2, H272  |
| Ammonium sulfate                          | (CAS-No.) 7783-20-2<br>(EC-No.) 231-984-1                                 | 4,24  | Not classified  |
| Sodium dihydrogen phosphate dihydrate     | (CAS-No.) 13472-35-0<br>(EC-No.) 231-449-2                                | 4,12  | Not classified  |
| Magnesium sulfate anhydrous               | (CAS-No.) 7487-88-9<br>(EC-No.) 231-298-2                                 | 3,84  | Not classified  |
| Calcium chloride                          | (CAS-No.) 10043-52-4<br>(EC-No.) 233-140-8<br>(EC Index-No.) 017-013-00-2 | 3,58  | Eye Irrit. 2, H319  |
| Gamborg B5 vitamin mixture                |   | 3,54  | Not classified  |
| Ethylenediaminetetraacetate ferric sodium | (CAS-No.) 15708-41-5<br>(EC-No.) 239-802-2                                | 1,16  | Not classified  |
| Manganese sulfate monohydrate             | (CAS-No.) 10034-96-5<br>(EC-No.) 232-089-9<br>(EC Index-No.) 025-003-00-4 | 0,316 | Eye Dam. 1, H318<br>STOT RE 2, H373<br>Aquatic Chronic 2, H411  |

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|   |   |         |  |
|---|---|---------|--|
| Boric acid<br>substance listed as REACH Candidate                                 | (CAS-No.) 10043-35-3<br>(EC-No.) 233-139-2<br>(EC Index-No.) 005-007-00-2 | 0,095   | Repr. 1B, H360FD   |
| Zinc sulphate   | (CAS-No.) 7446-20-0<br>(EC-No.) 231-793-3<br>(EC Index-No.) 030-006-00-9  | 0,063   | Acute Tox. 4 (Oral),<br>H302<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410   |
| Potassium iodide  | (CAS-No.) 7681-11-0<br>(EC-No.) 231-659-4                                 | 0,024   | Acute Tox. 4 (Oral),<br>H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319  |
| Sodium molybdate dihydrate  | (CAS-No.) 10102-40-6<br>(EC-No.) 231-551-7                                | 0,0079  | Not classified   |
| Cobalt(II) chloride<br>substance listed as REACH Candidate<br>(Cobalt dichloride) | (CAS-No.) 7646-79-9<br>(EC-No.) 231-589-4<br>(EC Index-No.) 027-004-00-5  | 0,00079 | Acute Tox. 4 (Oral),<br>H302<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>Muta. 2, H341<br>Carc. 1B, H350i<br>Repr. 1B, H360F<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Copper sulphate   | (CAS-No.) 7758-99-8<br>(EC-No.) 231-847-6<br>(EC Index-No.) 029-004-00-0  | 0,00079 | Acute Tox. 4 (Oral),<br>H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410  |

### Specific concentration limits:

| Name                | Product identifier  | Specific concentration limits |
|---------------------|---|-------------------------------|
| Boric acid          | (CAS-No.) 10043-35-3<br>(EC-No.) 233-139-2<br>(EC Index-No.) 005-007-00-2 | (C >= 5,5) Repr. 1B, H360FD   |
| Cobalt(II) chloride | (CAS-No.) 7646-79-9<br>(EC-No.) 231-589-4<br>(EC Index-No.) 027-004-00-5  | (C >= 0,01) Carc. 1B, H350i   |

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Seek medical attention if ill effect develops. |
| First-aid measures after inhalation   | : Remove victim to fresh air.                    |
| First-aid measures after skin contact | : Wash skin with mild soap and water.            |
| First-aid measures after eye contact  | : Rinse with water.                              |
| First-aid measures after ingestion    | : Rinse mouth.                                   |

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

|                                     |                           |
|-------------------------------------|---------------------------|
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after eye contact  | : Redness, pain.          |

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam.  
Dry chemical powder.  
Carbon dioxide (CO<sub>2</sub>).  
Water spray.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Under fire conditions, hazardous fumes will be present:  
- CO<sub>x</sub>  
- NO<sub>x</sub>  
- SO<sub>x</sub>.

### 5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.  
Protection during firefighting : Wear proper protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid raising powdered materials into airborne dust.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Wear suitable protective clothing.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up dry powder and dispose properly.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust formation. Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature  
Store in dry, well-ventilated area  
Hygroscopic  
Keep container tightly closed and dry.

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### 7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Hand protection:

| Type   | Material             | Permeation        | Thickness (mm) | Standard |
|--------|----------------------|-------------------|----------------|----------|
| Gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,11           | EN 374   |

#### Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

#### Skin and body protection:

In case of possible repeated skin contact wear protective clothing

#### Respiratory protection:

Where excessive dust may result, wear approved mask. Type P2 (EN 143)

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |                             |
|--|-----------------------------|
| Physical state                             | : Solid                     |
| Appearance                                 | : Powder.                   |
| Colour                                     | : White to slightly yellow. |
| Odour                                      | : Characteristic. Weak.     |
| Odour threshold                            | : No data available         |
| pH   | : No data available         |
| Relative evaporation rate (butylacetate=1) | : No data available         |
| Melting point                              | : No data available         |
| Freezing point                             | : No data available         |
| Boiling point                              | : No data available         |
| Flash point                                | : No data available         |
| Auto-ignition temperature                  | : No data available         |
| Decomposition temperature                  | : No data available         |
| Flammability (solid, gas)                  | : No data available         |
| Vapour pressure                            | : No data available         |
| Relative vapour density at 20 °C           | : No data available         |
| Relative density                           | : No data available         |
| Solubility                                 | : Readily soluble in water. |
| Log Pow                                    | : No data available         |
| Viscosity, kinematic                       | : No data available         |
| Viscosity, dynamic                         | : No data available         |

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|                      |                     |
|----------------------|---------------------|
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits     | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions of storage, handling and use.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Moisture.

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Thermal decomposition generates :

- COx
- NOx
- SOx
- Phosphorus oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Acute toxicity                    | : Not classified                    |
| Skin corrosion/irritation         | : Causes skin irritation.           |
| Serious eye damage/irritation     | : Causes serious eye irritation.    |
| Respiratory or skin sensitisation | : Not classified                    |
| Germ cell mutagenicity            | : Not classified                    |
| Carcinogenicity                   | : Not classified                    |
| Reproductive toxicity             | : Not classified                    |
| STOT-single exposure              | : May cause respiratory irritation. |
| STOT-repeated exposure            | : Not classified                    |
| Aspiration hazard                 | : Not classified                    |

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Prevent entry to sewers and public waters. Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.  
Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

| ADR                                     | IMDG          | IATA          |
|---|---------------|---------------|
| <b>14.1. UN number</b>                  |               |               |
| Not regulated                           | Not regulated | Not regulated |
| <b>14.2. UN proper shipping name</b>    |               |               |
| Not regulated                           | Not regulated | Not regulated |
| Not regulated                           | Not regulated | Not regulated |
| <b>14.3. Transport hazard class(es)</b> |               |               |
| Not regulated                           | Not regulated | Not regulated |
| Not regulated                           | Not regulated | Not regulated |
| <b>14.4. Packing group</b>              |               |               |
| Not regulated                           | Not regulated | Not regulated |
| <b>14.5. Environmental hazards</b>      |               |               |
| Not regulated                           | Not regulated | Not regulated |
| No supplementary information available  |               |               |

### 14.6. Special precautions for user

#### . Overland transport

Not regulated

#### - Transport by sea

Not regulated

#### - Air transport

Not regulated

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### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list  $\geq 0,1$  % / SCL

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

Ensure all national/local regulations are observed.

#### Germany

Reference to AwSV

: Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen

: Manganese sulfate monohydrate, Cobalt(II) chloride are listed

SZW-lijst van mutagene stoffen

: Manganese sulfate monohydrate is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: Boric acid, Cobalt(II) chloride are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: Boric acid is listed

#### Denmark

Recommendations Danish Regulation

: Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

|     |                                |       |                          |
|-----|--------------------------------|-------|--------------------------|
| 2.2 | Hazard statements (CLP)        | Added | H315;H319;H335           |
| 2.2 | Signal word (CLP)              | Added | Warning                  |
| 2.2 | Hazard pictograms (CLP)        | Added | GHS07                    |
| 2.2 | Precautionary statements (CLP) | Added | P261;P302+P352;P305+P351 |



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### Abbreviations and acronyms:

|       |   |
|-------|---|
| ATE   | Acute Toxicity Estimate   |
| ADR   | European Agreement concerning the International Carriage of Dangerous Goods by Road               |
| BCF   | Bioconcentration factor   |
| CLP   | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008                       |
| DPD   | Dangerous Preparations Directive 1999/45/EC   |
| DSD   | Dangerous Substances Directive 67/548/EEC   |
| IATA  | International Air Transport Association   |
| IMDG  | International Maritime Dangerous Goods  |
| LC50  | Median lethal concentration   |
| LD50  | Median lethal dose  |
| LOAEL | Lowest Observed Adverse Effect Level  |
| NOAEC | No-Observed Adverse Effect Concentration  |
| PBT   | Persistent Bioaccumulative Toxic  |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| SDS   | Safety Data Sheet   |

### Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. TNO (Netherlands Organisation for Applied Scientific Research).

### Full text of H- and EUH-statements:

|                     |  |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4  |
| Aquatic Acute 1     | Hazardous to the aquatic environment — Acute Hazard, Category 1                            |
| Aquatic Chronic 1   | Hazardous to the aquatic environment — Chronic Hazard, Category 1                          |
| Aquatic Chronic 2   | Hazardous to the aquatic environment — Chronic Hazard, Category 2                          |
| Carc. 1B            | Carcinogenicity (inhalation) Category 1B   |
| Eye Dam. 1          | Serious eye damage/eye irritation, Category 1  |
| Eye Irrit. 2        | Serious eye damage/eye irritation, Category 2  |
| Muta. 2             | Germ cell mutagenicity, Category 2   |
| Ox. Sol. 2          | Oxidising Solids, Category 2   |
| Repr. 1B            | Reproductive toxicity, Category 1B   |
| Repr. 1B            | Reproductive toxicity, Category 1B   |
| Resp. Sens. 1       | Respiratory sensitisation, Category 1  |
| Skin Irrit. 2       | Skin corrosion/irritation, Category 2  |
| Skin Sens. 1        | Skin sensitisation, Category 1   |
| STOT RE 2           | Specific target organ toxicity — Repeated exposure, Category 2                             |
| STOT SE 3           | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H272                | May intensify fire; oxidiser.  |
| H302                | Harmful if swallowed.  |
| H315                | Causes skin irritation.  |
| H317                | May cause an allergic skin reaction.   |
| H318                | Causes serious eye damage.   |
| H319                | Causes serious eye irritation.   |
| H334                | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                 |
| H335                | May cause respiratory irritation.  |
| H341                | Suspected of causing genetic defects.  |

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|        |  |
|--------|--|
| H350i  | May cause cancer by inhalation.                                    |
| H360F  | May damage fertility.  |
| H360FD | May damage fertility. May damage the unborn child.                 |
| H373   | May cause damage to organs through prolonged or repeated exposure. |
| H400   | Very toxic to aquatic life.  |
| H410   | Very toxic to aquatic life with long lasting effects               |
| H411   | Toxic to aquatic life with long lasting effects.                   |

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*