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

• **Product identifier**
  - **Trade name:** VARION/ES-1
  - **Article number:** 107 050Y
  - **Description:** Multiple standard solution 1 (low concentration)
  - **Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.
  - **Application of the substance / the preparation:** Calibration solution

• **Manufacturer/Supplier:**
  YSI
  1725 Brannum Lane Yellow
  Springs, OH 45387 USA
  phone: +1 937-767-7241

• Information department: Email: MSDSinfo@Xyleminc.com
• **Emergency telephone number:** Chemtrec: (USA & Canada) 800-424-9300  (International) 001 703-527-3887

2 Hazards identification

• **Classification of the substance or mixture**
  • **Classification according to Regulation (EC) No 1272/2008:** The product is not classified according to the CLP regulation.

• **Label elements:**
  • **Labelling according to Regulation (EC) No 1272/2008:** Void
  • **Hazard pictograms:** Void
  • **Signal word:** Void
  • **Hazard statements:** Void

3 Composition/information on ingredients

• **Chemical characterization:**
  • **Description:**
    Mixture of substances listed below with nonhazardous additions.
    Water, ammonium nitrate (<0,01 %), potassium nitrate (<0,01 %)
  • **Dangerous components:** Void
  • **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

• **Description of first aid measures**
  • **After inhalation:** Supply fresh air.
  • **After skin contact:** Rinse skin with water/shower.
  • **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  • **After swallowing:**
    Rinse out mouth and then drink plenty of water.
    Get medical advice/attention if you feel unwell.
  • **Information for doctor:**
    • **Most important symptoms and effects, both acute and delayed** No further relevant information available.
5 Firefighting measures

• Extinguishing media
  • Suitable extinguishing agents: The product is not flammable. Extinguishing agent to suit environment.
  • Special hazards arising from the substance or mixture: No hazards to be particularly mentioned.
  • Advice for firefighters
  • Protective equipment: No special measures required.

6 Accidental release measures

• Personal precautions, protective equipment and emergency procedures
  No special measurements required when handled properly.
  • Environmental precautions: No special measures required.
  • Methods and material for containment and cleaning up: Wash off with water.

7 Handling and storage

• Handling:
  • Precautions for safe handling: No special precautions are necessary if used correctly.
  • Information about fire - and explosion protection: No special measures required.

• Conditions for safe storage, including any incompatibilities
  • Requirements to be met by storerooms and receptacles: No special requirements.
  • Information about storage in one common storage facility: Not required.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

• Control parameters
  • Ingredients 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 valid during the making were used as basis.

• Exposure controls
  • Personal protective equipment:
    • General protective and hygienic measures:
      Avoid contact with the eyes and skin.
      Take off contaminated clothing and wash it before reuse.
      Wash hands before breaks and at the end of work.
    • Respiratory protection: Not required.
    • Protection of hands: Protective gloves recommended for frequent or long-term skin contact.
    • Material of gloves: Nitrile rubber, NBR
    • Eye protection: Safety glasses

(Contd. on page 3)
### 9 Physical and chemical properties

#### Information on basic physical and chemical properties

**General Information**
- **Appearance:** Fluid
- **Colour:** Colourless
- **Odour:** Odourless

**pH-value at 20 °C:** < 7

**Change in condition**
- **Melting point/Melting range:** ca. 0 °C
- **Boiling point/Boiling range:** > 100 °C

**Flash point:** Not applicable.

**Self-igniting:** Product is not selfigniting.

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

**Vapour pressure at 20 °C:** 23 hPa

**Density at 20 °C:** 1 g/cm³

**Solubility in / Miscibility with water:** Fully miscible.

**Viscosity:**
- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

**Other information** No further relevant information available.

### 10 Stability and reactivity

**Reactivity** No further relevant information available.

**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 further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
12 Ecological information

- **Toxicity**
  - *Aquatic toxicity*: No further relevant information available.
- **Persistence and degradability**: No further relevant information available.
- **Behaviour in environmental systems**:
  - *Bioaccumulative potential*: No further relevant information available.
  - *Mobility in soil*: No further relevant information available.
- **Additional ecological information**:
  - *General notes*: Generally not hazardous for water
  - *Other adverse effects*: No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Disposal must comply with the relevant local regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.
- **Uncleaned packaging**:
  - **Recommendation**: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Packagings that may not be cleansed are to be disposed of in the same manner as the product.
  - **Recommended cleansing agents**: Water, if necessary together with cleansing agents.

14 Transport information

- **UN-Number**
  - *ADR, ADN, IMDG, IATA*: Void
- **UN proper shipping name**
  - *ADR, ADN, IMDG, IATA*: Void
- **Transport hazard class(es)**
  - *ADR, ADN, IMDG, IATA*: Void
  - *Class*: Void
- **Packing group**
  - *ADR, IMDG, IATA*: Void
- **Environmental hazards**: Not applicable.
- **Transport in bulk according to Annex II of Marpol and the IBC Code**: Not applicable.
- **UN "Model Regulation"**: Void

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Directive 2012/18/EU**
  - **Named dangerous substances - ANNEX I**: None of the ingredients is listed.
  - **Chemical safety assessment**: A Chemical Safety Assessment has not been carried out.
16 Other information

- 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)
  IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
  ICAO: International Civil Aviation Organisation
  ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
  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
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  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)

* Data compared to the previous version altered.