Cover Page for Safety Data Sheet

(adapted to Swiss law – ChemV, ChemG, ChemRRV, VVEA, VeVA, LVA)

Product Identification:

Trade name: IONTEQ Mixed Bed Resin pH+

Product type: Mixed bed ion exchange resin (strong acid cation exchanger in H-form and strong base anion exchanger in OH-form) with anion excess for pH control, for complete demineralisation of water

Intended Use: Mixed bed resin with anion excess for complete demineralisation and pH control of heating system fill and make-up water, cooling and process water as well as demineralised water for technical applications, in particular according to SWKI BT 102-01, VDI 2035 and ÖNORM H 5195-1.

Safety Data Sheet Version: 1.0

Date of Safety Data Sheet: 28.11.2025

Supplier / Distributor (Switzerland):

IONTEQ GmbH
Grossbruggerweg 3
CH-7000 Chur
Switzerland
Telephone: +41 81 525 55 29
Email: info@ionteq.ch
Internet: www.ionteq.ch

National Emergency Number:

Tox Info Suisse: 145 (24-hour reachable, only from within Switzerland)

From abroad (Information): +41 44 251 51 51

Notes for Users in Switzerland:

This safety data sheet has been prepared according to Regulation (EC) No. 1907/2006 (REACH) as amended by Regulation (EU) 2020/878 and adapted to the requirements of Swiss chemical law (ChemG, ChemV, ChemRRV).

In Section 1, the Swiss distributor (IONTEQ GmbH) and the national emergency number (Tox Info Suisse 145) are specified.

Sections 7 and 8 contain information on the protection of workers and on the selection of suitable personal protective equipment, taking into account the relevant SUVA and VUV regulations.

Section 13 describes disposal in accordance with the Ordinance on the Avoidance and Disposal of Waste (VVEA), the Ordinance on the Movement of Waste (VeVA) and the UVEK Ordinance on Lists for the Movement of Waste (LVA). The classification of spent resin depends on the absorbed substances and must be coordinated with the disposal company and the cantonal authorities.

Section 15 lists the relevant European (REACH, CLP, Regulation (EU) 2020/878) and Swiss legal provisions (ChemG, ChemV, ChemRRV, VVEA, VeVA, LVA) applicable to this product.

General Notes:

This cover page serves for quick orientation for users and competent authorities in Switzerland. The complete safety data sheet "IONTEQ Mixed Bed Resin pH+, Version 1.0, Date 28.11.2025", which immediately follows this cover page, is authoritative for the safety-related information.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) as amended by Regulation (EU) 2020/878 and adapted to Swiss chemical law (ChemV)

IONTEQ Mixed Bed Resin pH+
Version: 1.0
Date of compilation: 28.11.2025

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

1.1 Product identifier

Product name: IONTEQ Mixed Bed Resin pH+
Product type: Mixed bed ion exchange resin (cation and anion exchanger in H- and OH-form) with anion excess for pH control
Internal designation: technical mixed bed resin for complete demineralisation of water

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

Relevant identified uses:

- Mixed bed resin with anion excess for complete demineralisation and pH increase of heating system fill and make-up water
  Treatment of heating system fill and make-up water in accordance with SWKI BT 102-01, VDI 2035 and ÖNORM H 5195-1
  Treatment of cooling and process water as well as demineralised water for technical applications

- **Uses advised against:**
- Not intended for the treatment of drinking water intended for direct human consumption
- Do not use as a food, feed or cosmetic additive
- Do not use for pharmaceutical or medical applications without subsequent suitable treatment and quality release

1.3 Details of the supplier of the safety data sheet

Manufacturer / Importer / Distributor:
IONTEQ GmbH
Grossbruggerweg 3
CH-7000 Chur
Switzerland
Telephone: +41 81 525 55 29
Email (expert advice on SDS): info@ionteq.ch
Internet: www.ionteq.ch

1.4 Emergency telephone number

National emergency number Switzerland:
Tox Info Suisse, Telephone 145 (24-hour reachable, only from Switzerland)
From abroad (for information purposes): +41 44 251 51 51

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP):
Serious eye damage/eye irritation, Category 1 (Eye Dam. 1)
H318: Causes serious eye damage.
No classification regarding physical hazards and environmental hazards according to available data.

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP):
Hazard pictogram:
GHS05 (Corrosion)
Signal word: Danger
Hazard statements:
H318 Causes serious eye damage.
Precautionary statements:
P102 Keep out of reach of children.
P264 Wash thoroughly after handling.
P280 Wear eye protection/face protection.
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 or doctor/physician.

2.3 Other hazards

The mixture contains no substances that meet the criteria for PBT (persistent, bioaccumulative, toxic) or vPvB (very persistent, very bioaccumulative) according to REACH Annex XIII.
According to current knowledge, the mixture contains no substances with endocrine disrupting properties within the meaning of relevant EU and Swiss regulations.
Larger releases into water bodies can locally change the pH value.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable (mixture).

3.2 Mixtures

Description of the mixture:
Mixed bed ion exchange resin with anion excess, consisting of a strong acid cation exchange resin in H-form and a strong base anion exchange resin in OH-form based on cross-linked polystyrene-divinylbenzene copolymers in water. Volume ratio cation resin : anion resin approx. 40 : 60.
Hazardous components:
Strong acid cation exchanger on styrene-divinylbenzene basis, H-form
CAS number: Polymer, not uniquely defined
EC number: not relevant (polymer)
Mass fraction: approx. 18–22 %
Classification (CLP): Eye Dam. 1; H318
Strong base anion exchanger on styrene-divinylbenzene basis with quaternary ammonium groups, OH-form
CAS number: Polymer, not uniquely defined
EC number: not relevant (polymer)
Mass fraction: approx. 28–32 %
Classification (CLP): Eye Dam. 1; H318
Other components:
Water
Mass fraction: approx. 48–52 %
Classification (CLP): not hazardous
Note: The mixture contains no other substances in concentrations that must be declared in the safety data sheet according to applicable law.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
If feeling unwell, persistent symptoms or in case of doubt, consult a doctor and show the safety data sheet. Remove contaminated clothing immediately.
After inhalation:
Inhalation of relevant quantities is not expected due to the form (moist granules). If dust or aerosols are inhaled, move affected person to fresh air and ensure rest. If symptoms persist, consult a doctor.
After skin contact:
Mechanically remove adhering resin beads. Wash thoroughly with plenty of water and soap. If irritation persists or skin redness occurs, consult a doctor.
After eye contact:
Immediately rinse cautiously and thoroughly with plenty of water for at least 15 minutes, keeping eyelids wide open. Remove contact lenses after a few minutes, if easily possible. Continue rinsing. Immediately contact an ophthalmologist or Tox Info Suisse.
After ingestion:
Rinse mouth and have person drink 1-2 glasses of water in small sips. Do not induce vomiting. Never give anything by mouth to an unconscious person. If symptoms occur, immediately call Tox Info Suisse (145) or a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Eyes: severe irritation, redness, pain, tearing, possible permanent damage if rinsed inadequately.
Skin: mild, temporary irritation possible in sensitive individuals.
Inhalation: no specific symptoms expected during normal use; possible irritation of the upper respiratory tract upon exposure to dust.
Ingestion: mechanical irritation of the gastrointestinal tract, discomfort, abdominal pain possible.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment. In case of eye contact, immediate ophthalmological examination is indicated.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Water spray, foam, fire extinguishing powder, carbon dioxide (CO2).
Unsuitable extinguishing media: High-pressure water jet (risk of spreading the burning material).

5.2 Special hazards arising from the substance or mixture
The product in the supplied form (moist granules) is not readily flammable.
In case of fire in the surroundings or upon drying and subsequent thermal decomposition, hazardous decomposition products may be formed, e.g., carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx), sulfur oxides (SOx) and further organic decomposition products.

5.3 Advice for firefighters
Cordon off area. Fight fire from a safe distance and if possible from upwind position.
Suitable protective equipment: wear self-contained breathing apparatus and complete protective clothing.
Do not allow contaminated firefighting water to enter sewers or water bodies, but collect separately and dispose of according to Section 13.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Spilled product can cause a slipping hazard.
Avoid contact with eyes. Wear suitable protective gloves and safety glasses/face shield.
Keep unauthorized personnel away.

6.2 Environmental precautions
Prevent entry into sewers, surface waters or groundwater. In case of larger quantities, inform the competent authorities.

6.3 Methods and material for containment and cleaning

Sweep up spilled product mechanically with broom or shovel and place in suitable, tightly closed containers. Absorb residues with water. Dispose of collected material according to Section 13.

6.4 Reference to other sections

Personal protective equipment see Section 8.
Disposal see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Observe usual precautions when handling chemicals.
Avoid dust formation, do not let the product dry out.
Avoid contact with eyes; prevent splashes and aerosols.
Ensure adequate ventilation when handling large quantities.
Observe occupational safety instructions in Switzerland (e.g., VUV, SUVA rulebooks).

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.
Store cool, dry, frost-free and protected from direct sunlight.
Do not store near strong oxidizing agents (e.g., concentrated nitric acid).
Protect from drying out, as dried resin can increase flammability.
Keep out of reach of children.

7.3 Specific end use(s)

Mixed bed ion exchange resin with anion excess for complete demineralisation of water for technical applications, in particular for the treatment of heating system fill and make-up water according to SWKI BT 102-01, VDI 2035 and ÖNORM H 5195-1 as well as for the production of demineralised water for cooling and process water.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:
No specific occupational exposure limits are established for the mixture itself.
The general limit values for inhalable and respirable dusts according to the current SUVA list of limit values at the workplace (Switzerland) apply.

8.2 Exposure controls

Appropriate engineering controls:
Good general room ventilation is usually sufficient. Provide local exhaust ventilation if dust or aerosol formation is possible.
Personal protective equipment:
Respiratory protection:
Not required during normal handling. In case of insufficient ventilation or dust development, use a particle-filtering half mask (at least filter class FFP2 according to EN 149:2001+A1:2009) or equivalent respiratory protection.
Hand protection:
Use chemical-resistant protective gloves according to EN 374 (e.g., gloves made of nitrile rubber or PVC). Breakthrough times and change intervals should be taken from the manufacturer's specifications.
Eye / face protection:
Wear tight-fitting safety goggles according to EN 166 or face shield, especially during transfer, maintenance and cleaning work.
Body / skin protection:
Wear suitable work clothing. Use protective clothing against splashes if risk is increased. Store contaminated clothing separately and clean before reuse.
Environmental exposure controls:
Avoid release into soil, water bodies or sewers if possible. Observe regional water protection regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: solid (moist granules, resin beads)
Colour: yellowish to brown (depending on product variant and ageing)
Odour: odourless to slightly characteristic
Odour threshold: not determined
pH: approximately neutral, approx. 6–8 (as aqueous suspension)

Melting point / freezing point: not applicable (polymeric mixture)
Boiling point / boiling range: not applicable
Flash point: not applicable (moist granules)
Flammability (solid, gas): not flammable in supplied moist state; limited combustibility of organic polymers possible after complete drying
Upper/lower explosion limit: not determined; dusts of the dry polymer can in principle form explosive mixtures with air
Vapour pressure: not applicable
Relative vapour density: not applicable
Relative density: approx. 1.15 g/cm^3 (resin/water mixture)
Bulk density: approx. 710–750 kg/m^3
Water solubility: insoluble, swellable
Solubility in organic solvents: practically insoluble
Partition coefficient n-octanol/water (log Kow): not determined (Polymer)
Auto-ignition temperature: not expected under normal storage conditions
Decomposition temperature: > 230 °C (thermal decomposition with formation of decomposition products)
Viscosity: not applicable (solid granules)
Explosive properties: no typical explosive properties in moist state
Oxidizing properties: none

9.2 Other information
Particle size (effective size): typically 0.45–0.65 mm
Particle size distribution: low proportion of fractions < 0.3 mm and > 1.2 mm
Product type: regenerable mixed bed resin

SECTION 10: Stability and reactivity

10.1 Reactivity
No hazardous reactions expected under normal ambient conditions.

10.2 Chemical stability
The product is chemically stable under proper storage and handling conditions.

10.3 Possibility of hazardous reactions
Contact with strong oxidizing agents, particularly concentrated nitric acid, may lead to exothermic reactions and formation of low molecular weight organic compounds.

10.4 Conditions to avoid
Strong heating, drying out, open flames and other ignition sources.

10.5 Incompatible materials
Strong oxidizing agents (e.g., nitric acid), strong oxidizing agents in general.

10.6 Hazardous decomposition products
In case of fire or strong heating: Carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides, further organic decomposition products.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity (oral, dermal, inhalation):
Based on available data and the physical form, the mixture is not classified as acutely toxic. No low LD50/LC50 values are available for similar products.
Skin corrosion/irritation:
Available data indicate at most mild to moderate skin irritation. The classification criteria for skin corrosion/skin irritation are not met.
Serious eye damage/eye irritation:
The mixture causes serious eye damage and is classified as Eye Dam. 1; H318. Splashes in the eyes can lead to permanent damage without immediate and adequate rinsing.
Respiratory or skin sensitization:
Based on available information, the mixture is not classified as sensitizing.
Germ cell mutagenicity:
No data indicating a mutagenic effect. The mixture is not classified as mutagenic.
Carcinogenicity:
No evidence of carcinogenic effects; the mixture contains no components classified as carcinogenic in relevant concentrations.
Reproductive toxicity:
No evidence of reproductive toxicity; the mixture contains no components classified as reproductive toxicants in relevant concentrations.
STOT - single exposure:
No specific target organ toxicity known.
STOT - repeated exposure:
No specific target organ toxicity known.
Aspiration hazard:

Due to the physical form (granules), no aspiration hazard exists according to CLP criteria.

11.2 Information on other hazards
Endocrine disrupting properties:
According to current knowledge, there is no evidence of endocrine disrupting properties.

SECTION 12: Ecological information

12.1 Toxicity
No specific ecotoxicity data available for the mixture.
Due to the physical form (insoluble granules), acute toxic effects in aquatic systems are not expected under normal use.

12.2 Persistence and degradability
The ion exchange polymers are considered not readily biodegradable. In technical applications, the resin remains in filter systems and is mostly removed mechanically.

12.3 Bioaccumulation potential
Due to insolubility and the high molecular weights of the polymer components, a relevant bioaccumulation potential is not expected.

12.4 Mobility in soil
The product is insoluble and, due to particle size, is largely retained in the solid phase (filter, soil). Mobility in soil is low.

12.5 Results of PBT and vPvB assessment
The mixture contains, according to current knowledge, no components that meet the PBT or vPvB criteria.

12.6 Endocrine disrupting properties
No components are known that are classified as endocrine disruptors or meet corresponding criteria.

12.7 Other adverse effects
No other known adverse effects. Improper disposal of larger quantities may lead to local changes in water chemistry (e.g., conductivity, pH value).

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product / Resin (unused):
The unused product can be classified as non-hazardous waste. Dispose of according to the specifications of the cantonal authorities and Swiss waste legislation (VVEA, VeVA, LVA).
Spent / exhausted resin:
The classification depends on the absorbed substances (e.g., metals, salts, organic contaminants). Spent resin may be considered special waste depending on the load. Disposal must be coordinated with the waste disposal company and the competent cantonal authorities.
Recommended waste codes (Europe, indicative values):

- 19 09 05: Spent ion exchange resins from drinking water or process water treatment
- 19 08 06: Spent ion exchange resins from wastewater treatment plants, not otherwise specified
  Packaging:
  Emptied, clean plastic containers can be sent for recycling.
  Containers not emptied or contaminated should be disposed of like the product.

SECTION 14: Transport information

14.1 UN number
The product is not a dangerous substance according to transport regulations (ADR/RID, IMDG, ICAO/IATA); no UN number assigned.

14.2 Proper shipping name
Not regulated.

14.3 Transport hazard class(es)
None.

14.4 Packaging group
Not applicable.

14.5 Environmental hazards
Not classified as environmentally hazardous.

14.6 Special precautions for user
Secure containers against tipping and damage during transport. Protect from frost, heat and direct sunlight.

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
EU:

- Regulation (EC) No 1907/2006 (REACH)
- Regulation (EC) No 1272/2008 (CLP)
- Regulation (EU) 2020/878 (Adaptation of the Safety Data Sheet format)
  Switzerland:
- Chemicals Act (ChemG)
- Chemicals Ordinance (ChemV)
- Chemical Risk Reduction Ordinance (ChemRRV)
- Ordinance on the Prevention of Accidents and Occupational Diseases (VUV)
- Ordinance on the Avoidance and the Disposal of Waste (VVEA)
- Ordinance on the Movement of Waste (VeVA)

- UVEK Ordinance on Lists for the Movement of Waste (LVA)
  Further relevant regulations of occupational, water and environmental protection law must be observed.

15.2 Chemical safety assessment
No chemical safety assessment according to REACH has been carried out for this mixture.

SECTION 16: Other information

Changes from previous versions:
Creation of a complete safety data sheet according to Regulation (EU) 2020/878; Classification and labeling of the product as Eye Dam. 1; H318 as well as addition of the specific Swiss requirements in Sections 1, 7, 8, 13 and 15.
Data sources:

Safety data sheets and technical product information from suppliers, internal assessments, and relevant legal regulations in their currently valid version.
Meaning of H-statements (abbreviated):
H318 Causes serious eye damage.

The information in this safety data sheet is based on the current state of our knowledge on the stated date and describes the product in terms of safety requirements. It does not constitute a warranty of specific properties and does not establish a contractual legal relationship. The user is responsible for compliance with all legal regulations regarding storage, handling and use of the product.