

Product Data Sheet

DIAION™ SKN1

DIAION™ SKN1 is a nuclear grade gel type strongly acidic cation exchange resin. It has standard cross-linkages and excellent properties. It can be used for cleanup system in primary circuit, cleanup system of SFP, radwaste, etc.

Product

| | | |
|------------------|--------------------|--|
| Grade Name | DIAION™ SKN1 | |
| Type | Strong Acid Cation | |
| Matrix | Styrene-DVB, Gel | |
| Functional Group | Sulfonic acid | |
| Ionic Form | H ⁺ | |

Specification

| | | |
|--|--------|----------|
| Whole Bead Count | - | 90 min. |
| Salt Splitting Capacity | meq/mL | 1.7 min. |
| Particle Size Distribution thr. 425 µm | % | 1.0 max. |
| Particle Size Distribution 425 - 1180 µm | % | 95 min. |
| Ionic Form Conversion (H ⁺) | eq% | 99 min. |
| Ionic Form Conversion (Na ⁺) | eq% | 0.1 max. |
| Metal Content (Ca) | mg/L | 50 max. |
| Metal Content (Pb) | mg/L | 10 max. |
| Metal Content (Fe) | mg/L | 50 max. |
| Metal Content (Cu) | mg/L | 10 max. |
| Water Extractables | g/L-R | 0.1 max. |

Typical Properties

| | | |
|---|------|------|
| Shipping Density | g/L | 790 |
| Water Content | % | 54 |
| Mean Particle Size | µm | 700 |
| Particle Density | g/mL | 1.20 |
| Total Swelling (Na ⁺ to H ⁺) | % | 9 |



Recommended Operating Conditions

| | | |
|-------------------------------|-----|--|
| Maximum Operating Temperature | °C | 120 |
| Operating pH Range | | 0 - 14 |
| Minimum Bed Depth | mm | 800 |
| Service Flow Rate | m/h | 10 - 40 |
| Regenerant | | HCl H ₂ SO ₄ |
| Regenerant Concentration | % | HCl 4 - 10 H ₂ SO ₄ 1 - 4 |
| Regenerant Level | g/L | 30 - 150 |
| Regenerant Flow Rate | m/h | 2 - 10 |
| Total Rinse Requirement | BV | 2 - 10 |

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ SKN1 resin in normal down flow operation is shown in the graphs below.

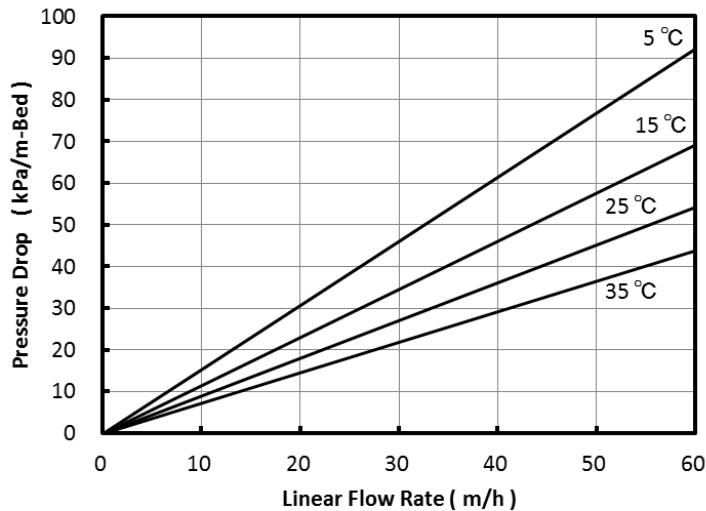


Fig. 1 Pressure Drop of SKN1

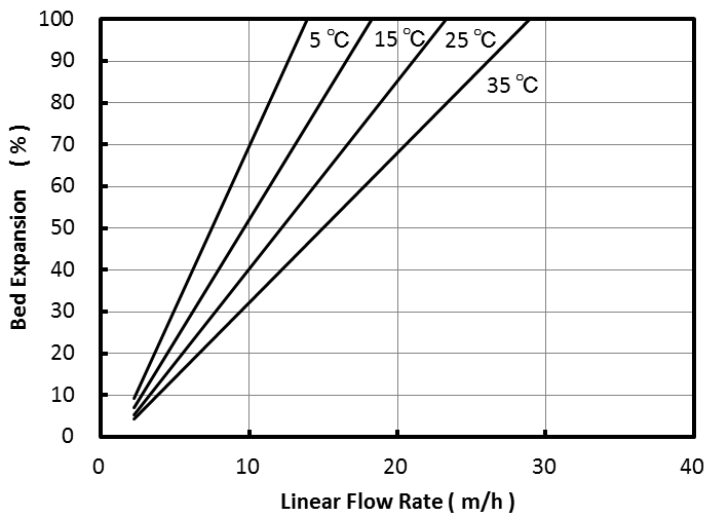


Fig. 2 Bed Expansion of SKN1

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