Product Data Sheet

# DIAION™ SAN1

DIAION™ SAN1 is a nuclear grade gel type strongly basic anion exchange resin. It has standard crosslinkages and excellent properties. It can be used for cleanup system in primary circuit, cleanup system of SFP, radwaste, etc.

## Product

| | |
|---|---|
| Grade Name | DIAION™ SAN1 |
| Type | Strong Base Anion |
| Matrix | Styrene-DVB, Gel |
| Functional Group | Type I (trimethyl ammonium groups) |
| Ionic Form | $OH^-$ |

## Specification

| | | |
|---|---|---|
| Whole Bead Count | - | 90 min. |
| Salt Splitting Capacity | meq/mL | 1.0 min. |
| Water Content | % | 57 - 67 |
| Particle Size Distribution on 1180 µm | % | 5 max. |
| Particle Size Distribution thr. 425 µm | % | 1 max. |
| Particle Size Distribution 425 - 1180 µm | % | 95 min. |
| Effective Size | mm | 0.45 min. |
| Uniformity Coefficient | - | 1.6 max. |
| Ionic Form Conversion OH Form | eq% | 90 min. |
| Ionic Form Conversion $CO_3$ Form | eq% | 10 max. |
| Ionic Form Conversion Cl Form | eq% | 0.2 max. |
| Metal Content (Ca) | mg/L | 50 max. |
| Metal Content (Pb) | mg/L | 10 max. |
| Water Extractables | g/L-R | 0.1 max. |

## Typical Properties

| | | |
|---|---|---|
| Shipping Density | g/L | 680 |
| Mean Particle Size | µm | 740 |
| Particle Density | g/mL | 1.07 |
| Total Swelling ($Cl^-$ to $OH^-$) | % | 23 |

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## Recommended Operating Conditions

| | | |
|---|---|---|
| Maximum Operating Temperature | °C | 80 ($Cl^-$) |
| | | 60 ($OH^-$) |
| Operating pH Range | | 0 - 14 |
| Minimum Bed Depth | mm | 800 |
| Service Flow Rate | m/h | 10 - 60 |
| Regenerant | | NaOH |
| Regenerant Concentration | % | NaOH 2 - 8 |
| Regenerant Level | g/L | 50 - 200 |
| Regenerant Flow Rate | m/h | 2 - 8 |
| Total Rinse Requirement | BV | 2 - 10 |

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## Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ SAN1 resin in normal down flow operation is shown in the graphs below.

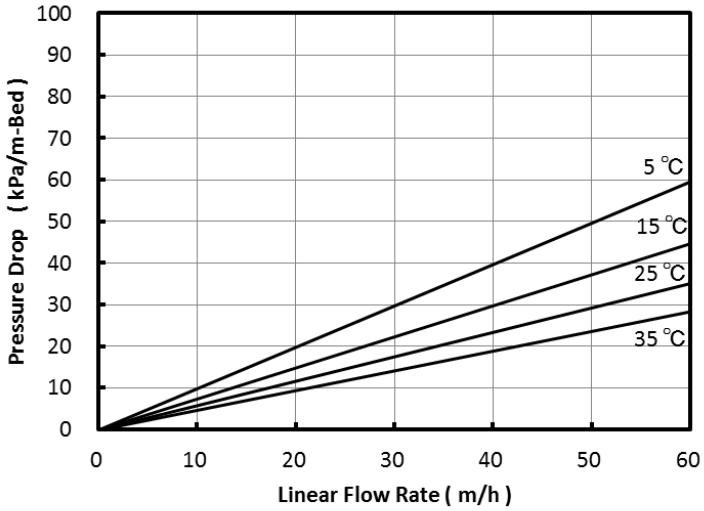


**Fig. 1 Pressure Drop of SAN1**

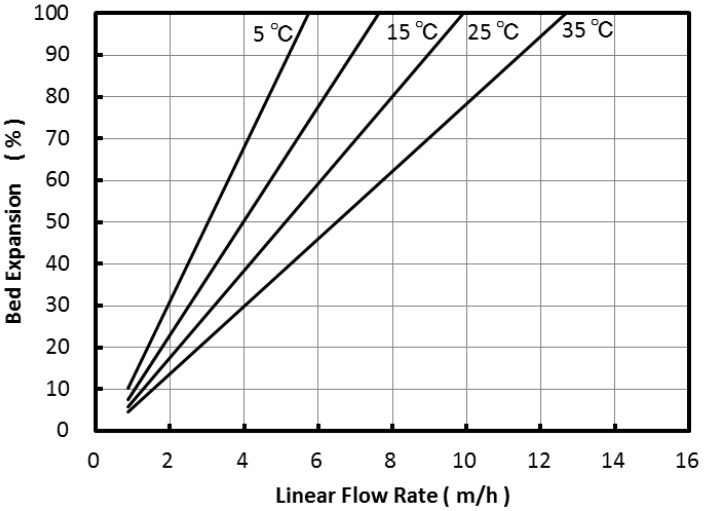


**Fig. 2 Bed Expansion of SAN1**

## Notice

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