

## Product Data Sheet

**DIAION™ WA55**

DIAION™ WA55 is a porous type weakly basic anion exchange resin. It has tertiary amine and quaternary ammonium functionality. A wide range of applications, especially in a field of demineralization of food and beverage, especially whey products, is recommended.

**Product**

|                  |                             |
|------------------|-----------------------------|
| Grade Name       | DIAION™ WA55                |
| Type             | Weak Base Anion             |
| Matrix           | Styrene-DVB, Porous         |
| Functional Group | Tertiary / Quaternary Amine |
| Ionic Form       | Cl <sup>-</sup>             |

**Specification**

|   |        |           |
|---|--------|-----------|
| Whole Bead Count*                       | -      | 90 min.   |
| Water Content*                          | %      | 60 - 65   |
| Volume Change (Cl/OH)                   | -      | 1.2 max.  |
| Total Capacity*                         | meq/mL | 1.1 - 1.3 |
| Salt Splitting Capacity*                | meq/mL | 0.6 - 0.7 |
| Salt Splitting Ratio*                   | %      | 50 - 60   |
| α-LA Adsorption*                        | g/L-R  | 1.0 max.  |
| Particle Size Distribution on 1180 μm*  | %      | 5 max.    |
| Particle Size Distribution thr. 300 μm* | %      | 1 max.    |
| Effective Size*                         | mm     | 0.40 min. |
| Uniformity Coefficient*                 | -      | 1.6 max.  |

Items marked \* are measured in OH form

**Typical Properties**

|                     |      |      |
|---------------------|------|------|
| Shipping Density    | g/L  | 690  |
| Mean Particle Size* | μm   | 600  |
| Particle Density    | g/mL | 1.07 |

Items marked \* are measured in OH form

**Recommended Operating Conditions**

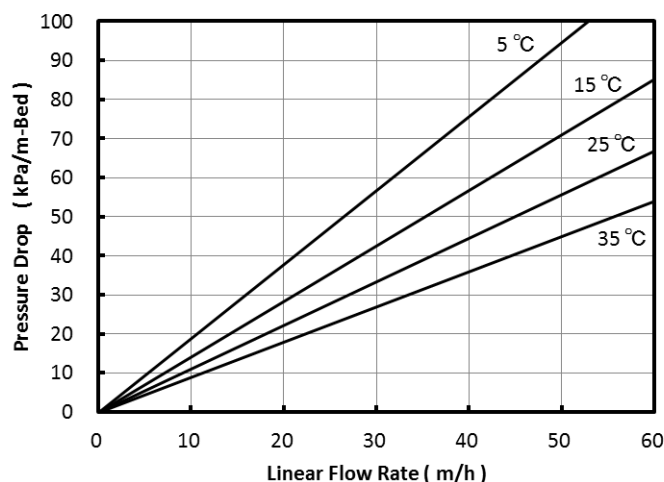
|                               |                 |            |
|-------------------------------|-----------------|------------|
| Maximum Operating Temperature | °C              | 100        |
| Operating pH Range            |                 | 0 - 9      |
| Minimum Bed Depth             | mm              | 800        |
| Service Flow Rate             | BV/h            | 10 - 40    |
| Regenerant                    |                 | NaOH       |
| Regenerant Concentration      | %               | NaOH 1 - 4 |
| Regenerant Level              | % of ionic load | 120        |
| Regenerant Flow Rate          | BV/h            | 2 - 6      |
| Total Rinse Requirement       | BV              | 5 - 10     |

1 BV(Bed Volume)=1 m<sup>3</sup>/m<sup>3</sup>-resin

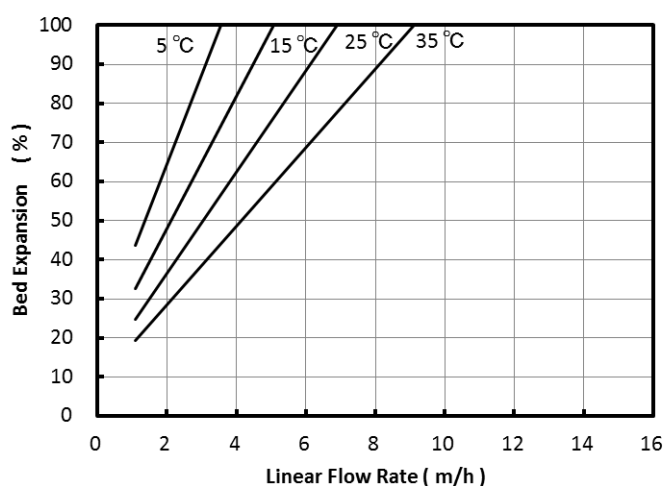


### Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ WA55 resin in normal down flow operation is shown in the graphs below.



**Fig. 1 Pressure Drop of WA55**



**Fig. 2 Bed Expansion of WA55**

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