**TDS 02059**

# DIAION WA30

DIAION WA30 is a highly porous type weakly basic anion exchange resin characterized by a high water retention content.

Its main characteristics are high operating capacity combined with a good regeneration efficiency, good exchange kinetics and great resistance to physical, thermal and osmotic shocks.

DIAION WA30 can be supplied under request in calibrated screen grades to meet all the standardized application systems (co-current, counter-current, fluidized beds, layered beds, continuous processes, etc.).

The main applications of this product are demineralization and decolorization of sugar and starch syrups, purification of formaldehyde, gelatine, glycerin, organic acids and others.
Its composition complies with the existing food processing rules and regulations.

## TYPICAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| Matrix | : | Highly porous copolymer styrene-DVB | |
| Functional group | : | Tertiary amine | |
| Colour and physical form | : | Yellowish-white opaque beads | |
| Particle size range | : | 0.3 ÷ 1.18 | m m |
| Effective size | : | 0.40 min | m m |
| Uniformity Coefficient | : | 1.6 | max |
| Ionic form at the delivery | : | Free Base | |
| Volume change | : | + 30 max | % F.B. --> $Cl^-$ form |
| Total exchange capacity | : | 1.5 min | eq/l |
| Water retention | : | 43 ÷ 55 | % |
| pH stability range | : | 0 ÷ 14 | |
| Operating pH range | : | 0 ÷ 9 | |
| Operating temperature | : | 100 °C max | (F.B.) |
| Shipping weight | : | 615 | g/l approx. |
| Standard packaging | : | 25 ÷ 50 | liter bags |

## RECOMMENDED OPERATING CONDITIONS

| | | | | |
|---|---|---|---|---|
| Minimum bed depth | : | 800 | m m | |
| Linear operating flowrate | : | 5 ÷ 50 | m/h | |
| Backwash expansion | : | 50 ÷ 80 | % | |
| Regenerants | : | NaOH | $NH_3$ | |
| Regenerant level range | : | 40 ÷ 80 | 20 ÷ 35 | g/l |
| Concentration range | : | 2 ÷ 4 | 2 ÷ 4 | % |
| Slow rinse volume | : | 1.5 ÷ 2 | BV | |
| Fast rinse volume | : | 4 ÷ 8 | BV | |

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# OPERATING CAPACITY

Operating capacity depends on various parameters, such as inlet composition, endpoint, kinetic load and regenerant level.

In case of need, please contact our TECHNICAL DEPARTMENT.

Fig. 1 BED EXPANSION IN WATER

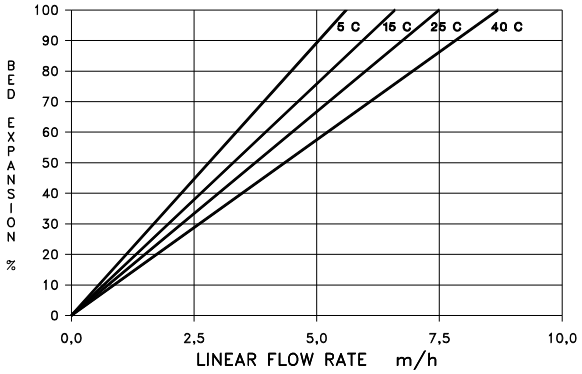
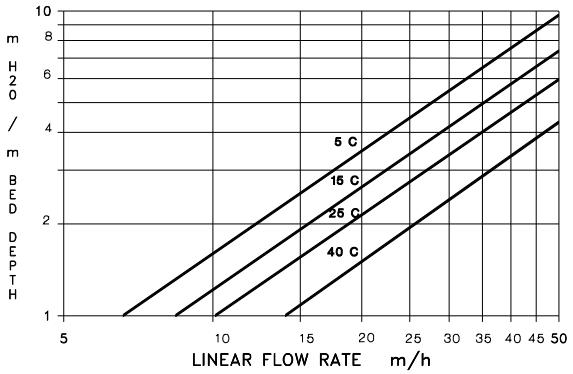



Fig. 2 PRESSURE DROP IN WATER




**RECOMMENDED NaOH QUALITY FOR REGENERATION (*)**

| | | | |
|---|---|---|---|
| Silica | 10 ppm | Sodium carbonate | 0.5 % |
| Iron | 10 ppm | Sodium chloride | 0.5 % |
| Mercury | 2 ppm | Sodium sulphate | 0.2 % |
| Heavy metals | 5 ppm | Hardness | 0 ppm |
| Chlorates | 10 ppm as $O_2$ | Suspended solids | 0 ppm |

(*) Values referred to NaOH 100%.