

**DOWEX G-26 (H)**

Uniform Particle Size Strong Acid Cation Exchange Resin for Specialty Demineralization and Catalyst Applications

| Product         | Type               | Matrix           | Functional group |
|-----------------|--------------------|------------------|------------------|
| DOWEX* G-26 (H) | Strong acid cation | Styrene-DVB, gel | Sulfonic acid    |

| Guaranteed Sales Specifications                                       |        | H+ form  |    |                      |
|-----------------------------------------------------------------------|--------|----------|----|----------------------|
| Total exchange capacity, min.                                         | eq/L   | 2.0      |    |                      |
| Water content                                                         | %      | 45 - 52  |    |                      |
| Bead size distribution†                                               |        |          |    |                      |
| Mean particle size                                                    | µm     | 650 ± 50 |    |                      |
| Uniformity coefficient, max.                                          |        | 1.1      |    |                      |
| Whole uncracked beads, min.                                           | %      | 95       |    |                      |
| Crush strength                                                        |        |          |    |                      |
| Average, min.                                                         | g/bead | 500      |    |                      |
| > 200 g/bead, min.                                                    | %      | 95       |    |                      |
| Ionic conversion, min.                                                | %      | 99.7     |    |                      |
| Trace metals, ppm dry resin, max.                                     |        |          |    |                      |
| Na                                                                    | Fe     | Cu       | Al | Heavy metals (as Pb) |
| 100                                                                   | 50     | 50       | 50 | 20                   |
| Low metals content make this product ideal for catalyst applications. |        |          |    |                      |

| Typical Physical and Chemical Properties           |                     | H <sup>+</sup> form |
|----------------------------------------------------|---------------------|---------------------|
| Total swelling (Na <sup>+</sup> → H <sup>+</sup> ) | %                   | 7                   |
| Particle density                                   | g/mL                | 1.22                |
| Shipping weight                                    | g/L                 | 800                 |
|                                                    | lbs/ft <sup>3</sup> | 49                  |

**Recommended Operating Conditions**

- Maximum operating temperature 130°C (265°F)
- pH range 0 - 14
- Bed depth, min. 450 mm (1.5 ft)
- Flow rates:
  - Service/fast rinse 5 - 150 m/h (2 - 60 gpm/ft<sup>2</sup>)
  - Backwash See Figure 1
  - Regeneration/displacement rinse 1 - 10 m/h (0.4 - 4 gpm/ft<sup>2</sup>)
- Total rinse requirement 3 - 6 bed volumes
- Regenerant 1 - 10% H<sub>2</sub>SO<sub>4</sub> or 4 - 8% HCl

† For additional particle size information, please refer to Particle Size Distribution Cross Reference Chart (Form No. 177-01775)

## Typical Properties and Applications

DOWEX G-26 (H) cation exchange resin is a high performance, uniform particle size, gel resin. It is uniquely suited to the stringent demands of the chemical processing industry due to its high strength, toughness, and oxidative stability. DOWEX G-26 has excellent crush strength to withstand the osmotic shock conditions encountered during solvent exchanges. DOWEX G-26 has low levels of extractables and color throw, important for organic solvent applications where these components can be extracted into the product.

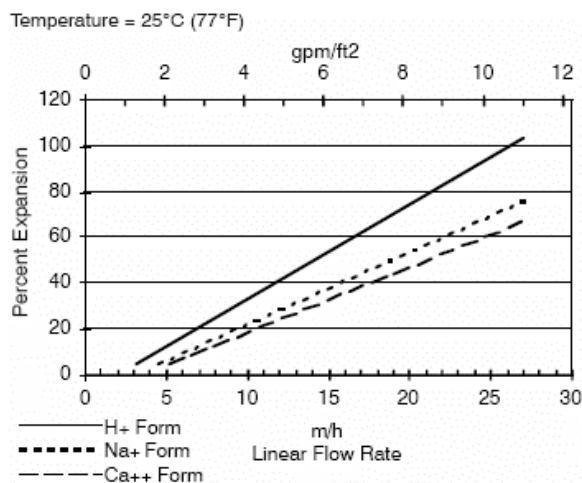
## Drying

DOWEX G-26 is sold water wet. In order for good contact with organic solvents for demineralization, metals removal and catalysis, DOWEX G-26 needs to be dried. It can be dried in a conventional or convection oven at 100°C or a vacuum oven. Drying can be monitored by weight change or moisture analysis of the DOWEX G-26 cation exchange resin.

## Packaging

5 cubic foot fiber drums

**Figure 1. Backwash Expansion Data**

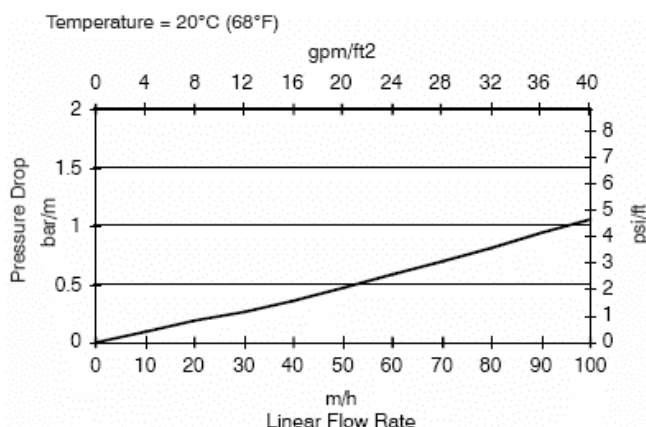


**For other temperatures use:**

$$F_T = F_{77°F} [1 + 0.008 (T_F - 77)], \text{ where } F \equiv \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_C - 45)], \text{ where } F \equiv \text{m/h}$$

**Figure 2. Pressure Drop Data**



**For other temperatures use:**

$$P_T = P_{20°C} / (0.026 T_C + 0.48), \text{ where } P \equiv \text{bar/m}$$

$$P_T = P_{68°F} / (0.014 T_F + 0.05), \text{ where } P \equiv \text{psi/ft}$$

## DOWEX Ion Exchange Resins

**Warning:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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