



AMBERLYST™ CH28

Industrial Grade Palladium Doped Strongly Acidic Catalyst

Introduction

AMBERLYST CH28 is a bead form, macroreticular, sulphonic acid, palladium doped ion exchange resin developed particularly for heterogeneous catalysis.

This catalyst is specially suitable for the production of Methyl-Iso-Butyl-Ketone (MIBK) from acetone. Another application is the production of Tert-Amyl-Methyl-Ether (TAME) from FCC cracked Naphta (Etherol process). In both cases, the hydrogenation reaction, catalyzed by the palladium loaded on the resin, prevents the formation of higher condensation products.

Properties

Matrix	Macroreticular styrene DVB copolymer
Physical form	Opaque spherical beads
Ionic form as shipped	H ⁺
Palladium load	0.7% min (dry basis)
Concentration of acid sites	≥ 1.6 eq/L[1] (H ⁺ form) ≥ 4.8 eq/kg (H ⁺ form)
Moisture holding capacity	52 to 58% (H ⁺ form)
Shipping weight	790 g/L (49.3 lbs/ft ³)
Particle size	
Harmonic mean size	0.850 to 1.050 mm
Uniformity coefficient	≤ 1.4
Fines contents	< 0.710 mm: 2.0% max
Coarse beads	> 1.180 mm: 15.0% max
Nitrogen BET	
Surface area	36 m ² /g
Average pore diameter	260 Å
Total pore volume	0.20 ml/g
Shrinkage	Water to acetone: 14% Water to MIBK: 19%

Suggested Operating Conditions

Maximum operating temperature	130°C (265°F)
Minimum bed depth	1000 mm (39 inches)
Operating flow rate	1 to 8 BV*/h (LHSV)
Pressure drop limitation	1 bar (15 psig) across the bed

* 1 BV = 1 m³ solution per m³ resin

Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERLYST CH28 as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLYST CH28 as a function of service flow rate and water temperature.

Figure 1: Bed expansion

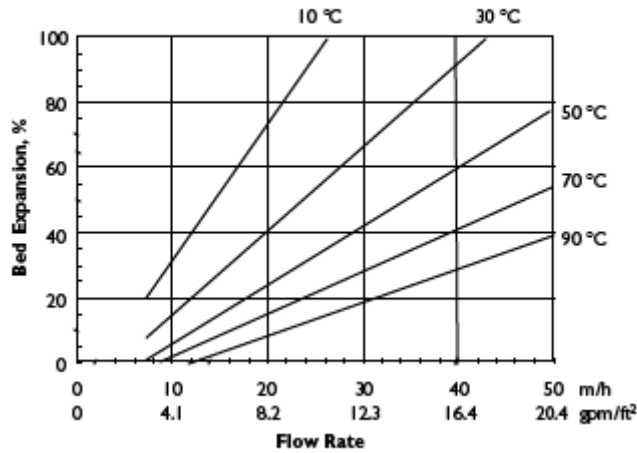
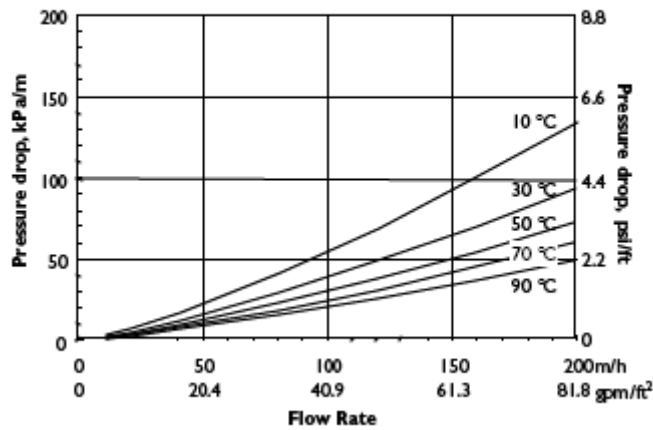


Figure 2: Pressure drop



For more information about DOW™ resins, call the Dow Water & Process Solutions business:

North America: 1-800-447-4369
 Latin America: (+55) 11-5188-9222
 Europe: +800-3-694-6367
 Italy: +800-783-825
 South Africa: +0800 99 5078
 Pacific: +8007776 7776
 China: +400 889-0789

<http://www.dowwaterandprocess.com>

Notice: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

