

## AMBERLYST™ 15DRY Industrial Grade Strongly Acidic Catalyst

### Description

AMBERLYST 15DRY is a bead form, strongly acidic ion exchange resin developed particularly for heterogeneous acid catalysis of a wide variety of organic reactions. It is also useful in non aqueous ion exchange systems for the removal of cationic impurities.

The macroreticular pore structure of AMBERLYST 15DRY permits ready access of liquid or gaseous reactants to the hydrogen ion sites located throughout the bead, thus ensuring successful performance even in non swelling organic media. The main applications are alkylation, esterification, etherification, condensation hydrolysis.

### Typical Properties

These properties are typical but do not constitute specifications.

|                                            |                                                |
|--------------------------------------------|------------------------------------------------|
| Physical form                              | Opaque beads                                   |
| Ionic form as shipped                      | Hydrogen                                       |
| Concentration of acid sites <sup>[1]</sup> | ≥ 4.7 eq/kg                                    |
| Water content <sup>[1]</sup>               | ≤ 1.6 % (H <sup>+</sup> form)                  |
| Shipping weight                            | 610 g/L (38 lbs/ft <sup>3</sup> )              |
| Fines content <sup>[1]</sup>               | < 0.300 mm : 0.5 % max<br>< 0.425 mm : 2 % max |
| Nitrogen BET                               |                                                |
| Surface area                               | 53 m <sup>2</sup> /g                           |
| Average pore diameter                      | 300 Å                                          |
| Total pore volume                          | 0.40 cc/g                                      |
| Swelling                                   | Dry to phenol : 38 %                           |

<sup>[1]</sup> Contractual value

Test methods are available on request.

### Suggested Operating Conditions

|                               |                                    |
|-------------------------------|------------------------------------|
| Maximum operating temperature | 120°C (250°F) in non aqueous media |
| Minimum bed depth             | 600 mm (24 inches)                 |
| Operating flow rate           | 1 to 5 BV*/h (LHSV)                |
| Pressure drop limitation      | 1 bar (15 psig) across the bed     |

\* 1 BV = 1 m<sup>3</sup> solution per m<sup>3</sup> of resin

All our products are produced in ISO 9001 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas

Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with ion exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with ion exchange resins, consult sources knowledgeable in the handling of these materials.

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