Supporting Information

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Technical Information

Global Mining Solutions

TI/EVH 0145 e February 2013

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supersedes edition dated February 2012

The Chemical Company

® = registered trademark of BASF SE

Description

Principal uses

Typical analysis

Shipping & Handling

Technical service

Health & Safety

Aliquat[®] HTA-1

Unique High Temperature Resistant Catalyst

Aliquat HTA-1 is a proprietary, water soluble, quaternary ammonium salt of unique structure. Due to its high water solubility, it can usually be easily removed from the product by water washing.

Aliquat HTA-1 is designed for those Phase Transfer catalyzed reactions that need to be run at or above 100 °C. Virtually all quaternary ammonium PT catalysts decompose below 100 °C. Aliquat HTA-1 is unique in that it has been found to be stable at temperatures well above 100 °C in some applications. Aliquat HTA-1 is thus ideally suited for cases where the reaction rate is too slow at lower temperatures or where the reaction components require higher temperatures.

n-C ₈ H ₁₇ -Br + NaOAc	HTA-1	N-C ₈ H ₁₇ -OAc	99% in 3 hrs
C ₆ H ₅ CH ₂ Cl + NaOAc	HTA-1	C ₆ H ₅ CH ₂ -OAc	97.5% in 15 min
n-C ₈ H ₁₇ -Br + KSCN	HTA-1	n-C ₈ H ₁₇ -SCN	98 % in 30 min
BPA + ECH	HTA-1	EPOXY RESIN	

Additionally, HTA-1 can be used for nucloephilic aromatic substitution and other reactions.

% HTA-1:	30-36
% NaCI:	10-15
% Water:	50-62
Color (Gardner):	≤5

Aliquat HTA-1 is supplied in 907 kg IBC.

Advice and assistance in the running of laboratory and plant tests is given by representatives of BASF, who are experienced in mineral processing applications.

Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant health and safety information sheet.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

February 2013

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Aliquat®HTA-1

A Unique High Temperature Resistant Phase Transfer Catalyst

Description:

Aliquat HTA-1 is a proprietary, water soluble, quaternary ammonium salt of unique structure. Because of its high water solubility, it can usually be easily removed from the product by water washing.

HTA-1 is designed for those Phase Transfer catalyzed reactions that need to be run at or above 100 degrees Centigrade. Virtually all quaternary ammonium PTC catalysts decompose below 100 degrees Centigrade. Aliquat HTA-1 is unique in that it has been found to be stable at temperatures well above 100 degrees Centigrade in some applications. Aliquat HTA-1 is thus ideally suited for cases where the reaction rate is too slow at lower temperatures or where the reaction components require higher temperatures.

Typical Analysis:

% HTA-1	30-36	% Sodium Chloride	10-15
% Water	50-62	pН	6.0-9.0
Gardner Color	<u><</u> 5		

APPLICATION EXAMPLES:

Aliphatic Displacement:

 $n-C_8H_{17}-Br + NaOAC \xrightarrow{HTA-1} n-C_8H_{17}-OAC 99\% in 3 hours$ $C_6H_5CH_2CI + NaOAC \xrightarrow{HTA-1} n-C_6H_5CH_2-OAC 97.5\% in 15 minutes$ $n-C_8H_{17}-Br + KSCN \xrightarrow{HTA-1} n-C_8H_{17}-SCN 98\% in 30 minutes$ BPA + ECH $\xrightarrow{HTA-1}$ EPOXY RESIN

Additionally HTA-1 can be used for nucleophilic aromatic substitution and other reactions. Details on this and the over 60 other patented reactions can be made available on request.

Availability:

Aliquat HTA-1 is available in drum quantities, and five gallon pails and can be supply in bulk by special arrangement.

Toxicity:

Material Safety Data Sheets are available on request.

Cognis Corporation Ion-Transfer Technology

Aliquat®HTA-1

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