



To : MESSRS.

Certificate of Analysis

This is to certify that the quality of the following commodity has been duly inspected by our testing division and is found to be in accordance with specifications of KURARAY CO., LTD.

30-Oct-2020

Name of Commodity : TERTIARY BUTYL ALCOHOL (TERTIARY BUTANOL)  
Lot No. : 13318  
Production Date : 6-Oct-2020  
Date of Analysis : 5-Oct-2020  
Best Before Date : 5-Oct-2022  
Quantity : 18,910 kg

Our Analysis Results

Test Item	Units	Specification	Results	Results
Appearance		Clear, Colorless Liquid	Clear, Colorless Liquid	OK
Purity (GC)	%	≧ 99.50	99.98	OK
Water	ppm	≦ 1000	67	OK
Freezing Point	°C	≧ 25.0	25.7	OK
Color (APHA)		≦ 10	<5	OK
Specific Gravity		0.7740-0.7770	0.7757	OK
Acidity as acetic acid	%	≦ 0.003	<0.001	OK
Residue On Evaporation	%	≦ 0.002	<0.001	OK

Note

With best regards,

Kuraray Co., Ltd.

大垣

For Masahiro Ogaki  
Chemicals Marketing & Sales Department  
Isoprene Chemicals Division  
Isoprene Company

KURARAY CO., LTD.

ISOPRENE CHEMICALS DIVISION

Ote Center Building

1-1-3 Otemachi, Chiyoda-ku, Tokyo, 100-8115 Japan

Telephone: 81-3-6701-1620. Facsimile: 81-3-6701-1646



To : MESSRS.

Certificate of Analysis

This is to certify that the quality of the following commodity has been duly inspected by our testing division and is found to be in accordance with specifications of KURARAY CO., LTD.

30-Oct-2020

Name of Commodity : TERTIARY BUTYL ALCOHOL (TERTIARY BUTANOL)  
Lot No. : 13319  
Production Date : 7-Oct-2020  
Date of Analysis : 5-Oct-2020  
Best Before Date : 6-Oct-2022  
Quantity : 5,890 kg

Our Analysis Results

Test Item	Units	Specification	Results	Results
Appearance		Clear, Colorless Liquid	Clear, Colorless Liquid	OK
Purity (GC)	%	$\geq$ 99.50	99.98	OK
Water	ppm	$\leq$ 1000	67	OK
Freezing Point	$^{\circ}$ C	$\geq$ 25.0	25.7	OK
Color (APHA)		$\leq$ 10	<5	OK
Specific Gravity		0.7740-0.7770	0.7757	OK
Acidity as acetic acid	%	$\leq$ 0.003	<0.001	OK
Residue On Evaporation	%	$\leq$ 0.002	<0.001	OK

Note

With best regards,

Kuraray Co., Ltd.

大垣

For Masahiro Ogaki  
Chemicals Marketing & Sales Department  
Isoprene Chemicals Division  
Isoprene Company

KURARAY CO., LTD.

ISOPRENE CHEMICALS DIVISION

Ote Center Building

1-1-3 Otemachi, Chiyoda-ku, Tokyo, 100-8115 Japan

Telephone: 81-3-6701-1620 Facsimile: 81-3-6701-1646



To : MESSRS.

Certificate of Analysis

This is to certify that the quality of the following commodity has been duly inspected by our testing division and is found to be in accordance with specifications of KURARAY CO., LTD.

30-Oct-2020

Name of Commodity : TERTIARY BUTYL ALCOHOL (TERTIARY BUTANOL)  
Lot No. : 13319  
Production Date : 7-Oct-2020  
Date of Analysis : 5-Oct-2020  
Best Before Date : 6-Oct-2022  
Quantity : 5,890 kg

Our Analysis Results

Test Item	Units	Specification	Results	Results
Appearance		Clear, Colorless Liquid	Clear, Colorless Liquid	OK
Purity (GC)	%	≧ 99.50	99.98	OK
Water	ppm	≦ 1000	67	OK
Freezing Point	°C	≧ 25.0	25.7	OK
Color (APHA)		≦ 10	<5	OK
Specific Gravity		0.7740-0.7770	0.7757	OK
Acidity as acetic acid	%	≦ 0.003	<0.001	OK
Residue On Evaporation	%	≦ 0.002	<0.001	OK

Note

With best regards,

Kuraray Co., Ltd.

大垣

For Masahiro Ogaki  
Chemicals Marketing & Sales Department  
Isoprene Chemicals Division  
Isoprene Company

KURARAY CO., LTD.

ISOPRENE CHEMICALS DIVISION

Ote Center Building

1-1-3 Otemachi, Chiyoda-ku, Tokyo, 100-8115 Japan

Telephone: 81-3-6701-1620 Facsimile: 81-3-6701-1646