

# Material Safety Data Sheet



## Biodiesel D6584 Kit Agilent Part Number 5190-1408

### 1. Product and company identification

<b>Product name</b>	: Biodiesel D6584 Kit Agilent Part Number 5190-1408	
<b>Material uses</b>	: Analytical chemistry.	
	ASTM® D6584 Standard Solution 1, in Pyridine	1 x 1 ml
	ASTM® D6584 Standard Solution 2, in Pyridine	1 x 1 ml
	ASTM® D6584 Standard Solution 3, in Pyridine	1 x 1 ml
	ASTM® D6584 Standard Solution 4, in Pyridine	1 x 1 ml
	ASTM® D6584 Standard Solution 5, in Pyridine	1 x 1 ml
	Butanediol Internal Standard #1	1 x 5 ml Ampoule
	Tricaprin Internal Standard #2	1 x 5 ml Ampoule
<b>Supplier/Manufacturer</b>	: Agilent Technologies, Inc. Logistics Center - Americas 500 Ships Landing Way New Castle, Delaware 19720	
<b>Part No. (Chemical Kit)</b>	: 5190-1408	
<b>Part No.</b>	ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 4, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 5, in Pyridine	Not available.
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Validation date</b>	: 10/31/2010	
<b><u>In case of emergency</u></b>	: 1-302-633-8777 1-877-4 Agilent (Information Telephone Number)	

### 2. Hazards identification

<b>Physical state</b>	ASTM® D6584 Standard Solution 1, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 2, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 3, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 4, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 5, in Pyridine	Liquid.
	Butanediol Internal Standard #1	Liquid.
	Tricaprin Internal Standard #2	Liquid.

## 2. Hazards identification

<b>Odor</b>	: ASTM® D6584 Standard Solution 1, in Pyridine ASTM® D6584 Standard Solution 2, in Pyridine ASTM® D6584 Standard Solution 3, in Pyridine ASTM® D6584 Standard Solution 4, in Pyridine ASTM® D6584 Standard Solution 5, in Pyridine Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Not available. Not available. Not available. Not available. Not available. Not available. Not available.
<b>Emergency overview</b>		
<b>Signal word</b>	: ASTM® D6584 Standard Solution 1, in Pyridine ASTM® D6584 Standard Solution 2, in Pyridine ASTM® D6584 Standard Solution 3, in Pyridine ASTM® D6584 Standard Solution 4, in Pyridine ASTM® D6584 Standard Solution 5, in Pyridine Butanediol Internal Standard #1 Tricaprin Internal Standard #2	WARNING! WARNING! WARNING! WARNING! WARNING! WARNING! WARNING!
<b>Hazard statements</b>	: ASTM® D6584 Standard Solution 1, in Pyridine  ASTM® D6584 Standard Solution 2, in Pyridine  ASTM® D6584 Standard Solution 3, in Pyridine  ASTM® D6584 Standard Solution 4, in Pyridine  ASTM® D6584 Standard Solution 5, in Pyridine	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.  FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.  FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.  FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.  FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

## 2. Hazards identification

Butanediol Internal Standard #1  
 FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Tricaprin Internal Standard #2  
 FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

### Precautions

: ASTM® D6584 Standard Solution 1, in Pyridine  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

ASTM® D6584 Standard Solution 2, in Pyridine  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

ASTM® D6584 Standard Solution 3, in Pyridine  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

ASTM® D6584 Standard Solution 4, in Pyridine  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

ASTM® D6584 Standard Solution 5, in Pyridine  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Butanediol Internal Standard #1  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Tricaprin Internal Standard #2  
 Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

## 2. Hazards identification

<b>Routes of entry</b>	: ASTM® D6584 Standard Solution 1, in Pyridine ASTM® D6584 Standard Solution 2, in Pyridine ASTM® D6584 Standard Solution 3, in Pyridine ASTM® D6584 Standard Solution 4, in Pyridine ASTM® D6584 Standard Solution 5, in Pyridine Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion. Dermal contact. Inhalation. Ingestion.
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### Potential acute health effects

<b>Inhalation</b>	: ASTM® D6584 Standard Solution 1, in Pyridine  ASTM® D6584 Standard Solution 2, in Pyridine  ASTM® D6584 Standard Solution 3, in Pyridine  ASTM® D6584 Standard Solution 4, in Pyridine  ASTM® D6584 Standard Solution 5, in Pyridine  Butanediol Internal Standard #1  Tricaprin Internal Standard #2	Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  Toxic by inhalation. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
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<b>Ingestion</b>	: ASTM® D6584 Standard Solution 1, in Pyridine ASTM® D6584 Standard Solution 2, in Pyridine ASTM® D6584 Standard Solution 3, in Pyridine ASTM® D6584 Standard Solution 4, in Pyridine ASTM® D6584 Standard Solution 5, in Pyridine Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Harmful if swallowed. Harmful if swallowed. Harmful if swallowed. Harmful if swallowed. Harmful if swallowed. Harmful if swallowed. Harmful if swallowed.
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## 2. Hazards identification

<b>Skin</b>	<ul style="list-style-type: none"> <li>: ASTM® D6584 Standard Solution 1, in Pyridine</li> <li>ASTM® D6584 Standard Solution 2, in Pyridine</li> <li>ASTM® D6584 Standard Solution 3, in Pyridine</li> <li>ASTM® D6584 Standard Solution 4, in Pyridine</li> <li>ASTM® D6584 Standard Solution 5, in Pyridine</li> <li>Butanediol Internal Standard #1</li> <li>Tricaprin Internal Standard #2</li> </ul>	<ul style="list-style-type: none"> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> <li>Harmful in contact with skin. Irritating to skin.</li> </ul>
<b>Eyes</b>	<ul style="list-style-type: none"> <li>: ASTM® D6584 Standard Solution 1, in Pyridine</li> <li>ASTM® D6584 Standard Solution 2, in Pyridine</li> <li>ASTM® D6584 Standard Solution 3, in Pyridine</li> <li>ASTM® D6584 Standard Solution 4, in Pyridine</li> <li>ASTM® D6584 Standard Solution 5, in Pyridine</li> <li>Butanediol Internal Standard #1</li> <li>Tricaprin Internal Standard #2</li> </ul>	<ul style="list-style-type: none"> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> <li>Irritating to eyes.</li> </ul>
<b><u>Potential chronic health effects</u></b>		
<b>Chronic effects</b>	<ul style="list-style-type: none"> <li>: ASTM® D6584 Standard Solution 1, in Pyridine</li> <li>ASTM® D6584 Standard Solution 2, in Pyridine</li> <li>ASTM® D6584 Standard Solution 3, in Pyridine</li> <li>ASTM® D6584 Standard Solution 4, in Pyridine</li> <li>ASTM® D6584 Standard Solution 5, in Pyridine</li> <li>Butanediol Internal Standard #1</li> <li>Tricaprin Internal Standard #2</li> </ul>	<ul style="list-style-type: none"> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> <li>Contains material that may cause target organ damage, based on animal data.</li> </ul>
<b>Carcinogenicity</b>	<ul style="list-style-type: none"> <li>: ASTM® D6584 Standard Solution 1, in Pyridine</li> <li>ASTM® D6584 Standard Solution 2, in Pyridine</li> <li>ASTM® D6584 Standard Solution 3, in Pyridine</li> <li>ASTM® D6584 Standard Solution 4, in Pyridine</li> <li>ASTM® D6584 Standard Solution 5, in Pyridine</li> <li>Butanediol Internal Standard #1</li> <li>Tricaprin Internal Standard #2</li> </ul>	<ul style="list-style-type: none"> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> </ul>
<b>Mutagenicity</b>	<ul style="list-style-type: none"> <li>: ASTM® D6584 Standard Solution 1, in Pyridine</li> <li>ASTM® D6584 Standard Solution 2, in Pyridine</li> <li>ASTM® D6584 Standard Solution 3, in Pyridine</li> <li>ASTM® D6584 Standard Solution 4, in Pyridine</li> </ul>	<ul style="list-style-type: none"> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> </ul>

## 2. Hazards identification

	ASTM® D6584 Standard Solution 5, in Pyridine	No known significant effects or critical hazards.
	Butanediol Internal Standard #1	No known significant effects or critical hazards.
	Tricaprin Internal Standard #2	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 2, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 3, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 4, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 5, in Pyridine	No known significant effects or critical hazards.
	Butanediol Internal Standard #1	No known significant effects or critical hazards.
	Tricaprin Internal Standard #2	No known significant effects or critical hazards.
<b>Developmental effects</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 2, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 3, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 4, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 5, in Pyridine	No known significant effects or critical hazards.
	Butanediol Internal Standard #1	No known significant effects or critical hazards.
	Tricaprin Internal Standard #2	No known significant effects or critical hazards.
<b>Fertility effects</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 2, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 3, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 4, in Pyridine	No known significant effects or critical hazards.
	ASTM® D6584 Standard Solution 5, in Pyridine	No known significant effects or critical hazards.
	Butanediol Internal Standard #1	No known significant effects or critical hazards.
	Tricaprin Internal Standard #2	No known significant effects or critical hazards.
<b>Target organs</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
	ASTM® D6584 Standard Solution 2, in Pyridine	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
	ASTM® D6584 Standard Solution 3, in Pyridine	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
	ASTM® D6584 Standard Solution 4, in Pyridine	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
	ASTM® D6584 Standard Solution 5, in Pyridine	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central



## 2. Hazards identification

Butanediol Internal Standard #1	nervous system (CNS). Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).
Tricaprin Internal Standard #2	Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

### Over-exposure signs/symptoms

#### **Inhalation**

: ASTM® D6584 Standard Solution 1, in Pyridine	Adverse symptoms may include the following: respiratory tract irritation coughing
ASTM® D6584 Standard Solution 2, in Pyridine	Adverse symptoms may include the following: respiratory tract irritation coughing
ASTM® D6584 Standard Solution 3, in Pyridine	Adverse symptoms may include the following: respiratory tract irritation coughing
ASTM® D6584 Standard Solution 4, in Pyridine	Adverse symptoms may include the following: respiratory tract irritation coughing
ASTM® D6584 Standard Solution 5, in Pyridine	Adverse symptoms may include the following: respiratory tract irritation coughing
Butanediol Internal Standard #1	Adverse symptoms may include the following: respiratory tract irritation coughing
Tricaprin Internal Standard #2	Adverse symptoms may include the following: respiratory tract irritation coughing

#### **Ingestion**

: ASTM® D6584 Standard Solution 1, in Pyridine	No specific data.
ASTM® D6584 Standard Solution 2, in Pyridine	No specific data.
ASTM® D6584 Standard Solution 3, in Pyridine	No specific data.
ASTM® D6584 Standard Solution 4, in Pyridine	No specific data.
ASTM® D6584 Standard Solution 5, in Pyridine	No specific data.
Butanediol Internal Standard #1	No specific data.
Tricaprin Internal Standard #2	No specific data.

#### **Skin**

: ASTM® D6584 Standard Solution 1, in Pyridine	Adverse symptoms may include the following: irritation redness
ASTM® D6584 Standard Solution 2, in Pyridine	Adverse symptoms may include the following: irritation redness
ASTM® D6584 Standard Solution 3, in Pyridine	Adverse symptoms may include the following: irritation redness
ASTM® D6584 Standard Solution 4, in Pyridine	Adverse symptoms may include the following: irritation redness
ASTM® D6584 Standard Solution 5, in Pyridine	Adverse symptoms may include the following: irritation redness
Butanediol Internal Standard #1	Adverse symptoms may include the following:

## 2. Hazards identification

	Tricaprin Internal Standard #2	irritation redness Adverse symptoms may include the following: irritation redness
<b>Eyes</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	ASTM® D6584 Standard Solution 2, in Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	ASTM® D6584 Standard Solution 3, in Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	ASTM® D6584 Standard Solution 4, in Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	ASTM® D6584 Standard Solution 5, in Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	Butanediol Internal Standard #1	Adverse symptoms may include the following: pain or irritation watering redness
	Tricaprin Internal Standard #2	Adverse symptoms may include the following: pain or irritation watering redness
<b>Medical conditions aggravated by over-exposure</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	ASTM® D6584 Standard Solution 2, in Pyridine	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	ASTM® D6584 Standard Solution 3, in Pyridine	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	ASTM® D6584 Standard Solution 4, in Pyridine	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	ASTM® D6584 Standard Solution 5, in Pyridine	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	Butanediol Internal Standard #1	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
	Tricaprin Internal Standard #2	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)



### 3. Composition/information on ingredients

Name	CAS number	%
ASTM® D6584 Standard Solution 1, in Pyridine Pyridine	110-86-1	60 - 100
ASTM® D6584 Standard Solution 2, in Pyridine Pyridine	110-86-1	60 - 100
ASTM® D6584 Standard Solution 3, in Pyridine Pyridine	110-86-1	60 - 100
ASTM® D6584 Standard Solution 4, in Pyridine Pyridine	110-86-1	60 - 100
ASTM® D6584 Standard Solution 5, in Pyridine Pyridine	110-86-1	60 - 100
Butanediol Internal Standard #1 Pyridine	110-86-1	60 - 100
Tricaprin Internal Standard #2 Pyridine	110-86-1	60 - 100

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### 4. First aid measures

<b>Eye contact</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	ASTM® D6584 Standard Solution 2, in Pyridine	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	ASTM® D6584 Standard Solution 3, in Pyridine	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	ASTM® D6584 Standard Solution 4, in Pyridine	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	ASTM® D6584 Standard Solution 5, in Pyridine	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	Butanediol Internal Standard #1	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
	Tricaprin Internal Standard #2	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

## 4. First aid measures

<b>Skin contact</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	ASTM® D6584 Standard Solution 2, in Pyridine	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	ASTM® D6584 Standard Solution 3, in Pyridine	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	ASTM® D6584 Standard Solution 4, in Pyridine	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	ASTM® D6584 Standard Solution 5, in Pyridine	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	Butanediol Internal Standard #1	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
	Tricaprin Internal Standard #2	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
<b>Inhalation</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
	ASTM® D6584 Standard Solution 2, in Pyridine	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
	ASTM® D6584 Standard Solution 3, in Pyridine	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
	ASTM® D6584 Standard Solution 4, in Pyridine	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## 4. First aid measures

	ASTM® D6584 Standard Solution 5, in Pyridine	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
	Butanediol Internal Standard #1	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
	Tricaprin Internal Standard #2	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
<b>Ingestion</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	ASTM® D6584 Standard Solution 2, in Pyridine	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	ASTM® D6584 Standard Solution 3, in Pyridine	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	ASTM® D6584 Standard Solution 4, in Pyridine	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	ASTM® D6584 Standard Solution 5, in Pyridine	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	Butanediol Internal Standard #1	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
	Tricaprin Internal Standard #2	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

## 4. First aid measures

<b>Protection of first-aiders</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	ASTM® D6584 Standard Solution 2, in Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	ASTM® D6584 Standard Solution 3, in Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	ASTM® D6584 Standard Solution 4, in Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	ASTM® D6584 Standard Solution 5, in Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Butanediol Internal Standard #1	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Tricaprin Internal Standard #2	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## 4. First aid measures

<b>Notes to physician</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	ASTM® D6584 Standard Solution 2, in Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	ASTM® D6584 Standard Solution 3, in Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	ASTM® D6584 Standard Solution 4, in Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	ASTM® D6584 Standard Solution 5, in Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Butanediol Internal Standard #1	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Tricaprin Internal Standard #2	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5. Fire-fighting measures

<b>Flammability of the product</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
	ASTM® D6584 Standard Solution 2, in Pyridine	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
	ASTM® D6584 Standard Solution 3, in Pyridine	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
	ASTM® D6584 Standard Solution 4, in Pyridine	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or

## 5. Fire-fighting measures

ASTM® D6584 Standard Solution  
5, in Pyridine

confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Butanediol Internal Standard #1

Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Tricaprin Internal Standard #2

Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

### Extinguishing media

#### Suitable

- |   |  |
|---|--|
| : ASTM® D6584 Standard Solution<br>1, in Pyridine | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| ASTM® D6584 Standard Solution<br>2, in Pyridine   | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| ASTM® D6584 Standard Solution<br>3, in Pyridine   | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| ASTM® D6584 Standard Solution<br>4, in Pyridine   | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| ASTM® D6584 Standard Solution<br>5, in Pyridine   | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| Butanediol Internal Standard #1                   | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| Tricaprin Internal Standard #2                    | Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |

#### Not suitable

- |   |                       |
|---|-----------------------|
| : ASTM® D6584 Standard Solution<br>1, in Pyridine | Do not use water jet. |
| ASTM® D6584 Standard Solution<br>2, in Pyridine   | Do not use water jet. |
| ASTM® D6584 Standard Solution<br>3, in Pyridine   | Do not use water jet. |
| ASTM® D6584 Standard Solution<br>4, in Pyridine   | Do not use water jet. |
| ASTM® D6584 Standard Solution<br>5, in Pyridine   | Do not use water jet. |
| Butanediol Internal Standard #1                   | Do not use water jet. |
| Tricaprin Internal Standard #2                    | Do not use water jet. |



## 5. Fire-fighting measures

<p><b>Special exposure hazards</b></p>	<p>: ASTM® D6584 Standard Solution 1, in Pyridine</p> <p>ASTM® D6584 Standard Solution 2, in Pyridine</p> <p>ASTM® D6584 Standard Solution 3, in Pyridine</p> <p>ASTM® D6584 Standard Solution 4, in Pyridine</p> <p>ASTM® D6584 Standard Solution 5, in Pyridine</p> <p>Butanediol Internal Standard #1</p> <p>Tricaprin Internal Standard #2</p>	<p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p> <p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</p>
<p><b>Hazardous thermal decomposition products</b></p>	<p>: ASTM® D6584 Standard Solution 1, in Pyridine</p> <p>ASTM® D6584 Standard Solution 2, in Pyridine</p> <p>ASTM® D6584 Standard Solution 3, in Pyridine</p> <p>ASTM® D6584 Standard Solution 4, in Pyridine</p>	<p>Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides</p> <p>Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides</p> <p>Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides</p> <p>Decomposition products may include the following materials:</p>

## 5. Fire-fighting measures

ASTM® D6584 Standard Solution 5, in Pyridine	carbon dioxide carbon monoxide nitrogen oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Butanediol Internal Standard #1	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Tricaprin Internal Standard #2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

<b>Personal precautions</b>	: ASTM® D6584 Standard Solution 1, in Pyridine  ASTM® D6584 Standard Solution 2, in Pyridine  ASTM® D6584 Standard Solution 3, in Pyridine  ASTM® D6584 Standard Solution 4, in Pyridine	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).  No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide
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## 6. Accidental release measures

ASTM® D6584 Standard Solution 5,  
in Pyridine

adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Butanediol Internal Standard #1

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Tricaprin Internal Standard #2

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions :** ASTM® D6584 Standard Solution 1,  
in Pyridine

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

ASTM® D6584 Standard Solution 2,  
in Pyridine

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

ASTM® D6584 Standard Solution 3,  
in Pyridine

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

ASTM® D6584 Standard Solution 4,  
in Pyridine

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

ASTM® D6584 Standard Solution 5,  
in Pyridine

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Butanediol Internal Standard #1

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 6. Accidental release measures

Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Tricaprin Internal Standard #2

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods for cleaning up

: ASTM® D6584 Standard Solution 1, in Pyridine

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

ASTM® D6584 Standard Solution 2, in Pyridine

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

ASTM® D6584 Standard Solution 3, in Pyridine

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

ASTM® D6584 Standard Solution 4, in Pyridine

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

ASTM® D6584 Standard Solution 5, in Pyridine

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Butanediol Internal Standard #1

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Tricaprin Internal Standard #2

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

### Handling

: ASTM® D6584 Standard Solution  
1, in Pyridine

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

ASTM® D6584 Standard Solution  
2, in Pyridine

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

ASTM® D6584 Standard Solution  
3, in Pyridine

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not

## 7. Handling and storage

breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

ASTM® D6584 Standard Solution  
4, in Pyridine

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

ASTM® D6584 Standard Solution  
5, in Pyridine

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-



## 7. Handling and storage

proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Butanediol Internal Standard #1

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Tricaprin Internal Standard #2

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not

## 7. Handling and storage

reuse container.

### Storage

: ASTM® D6584 Standard Solution  
1, in Pyridine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

ASTM® D6584 Standard Solution  
2, in Pyridine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

ASTM® D6584 Standard Solution  
3, in Pyridine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

ASTM® D6584 Standard Solution  
4, in Pyridine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

ASTM® D6584 Standard Solution  
5, in Pyridine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store

## 7. Handling and storage

Butanediol Internal Standard #1

in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Tricaprin Internal Standard #2

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			
<u>Ingredient</u>	<u>List name</u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>Other</u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>Other</u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>Other</u>	<u>Notations</u>
<b>ASTM® D6584 Standard Solution 1, in Pyridine</b> Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	
	BC 10/2009	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	-	-	-	-	-	-	-	-	
	QC 6/2008	5	16	-	-	-	-	-	-	-	
<b>ASTM® D6584 Standard Solution 2, in Pyridine</b> Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	
	BC 10/2009	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	-	-	-	-	-	-	-	-	
	QC 6/2008	5	16	-	-	-	-	-	-	-	
<b>ASTM® D6584 Standard Solution 3, in Pyridine</b> Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	
	BC 10/2009	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	-	-	-	-	-	-	-	-	
	QC 6/2008	5	16	-	-	-	-	-	-	-	
<b>ASTM® D6584 Standard Solution 4, in Pyridine</b> Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	
	BC 10/2009	1	-	-	-	-	-	-	-	-	
	ON 7/2010	1	-	-	-	-	-	-	-	-	
	QC 6/2008	5	16	-	-	-	-	-	-	-	
<b>ASTM® D6584 Standard Solution 5, in Pyridine</b>											

## 8. Exposure controls/personal protection

Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	-	-
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	-	-
	BC 10/2009	1	-	-	-	-	-	-	-	-	-	-
	ON 7/2010	1	-	-	-	-	-	-	-	-	-	-
	QC 6/2008	5	16	-	-	-	-	-	-	-	-	-
<b>Butanediol Internal Standard #1</b>												
Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	-	-
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	-	-
	BC 10/2009	1	-	-	-	-	-	-	-	-	-	-
	ON 7/2010	1	-	-	-	-	-	-	-	-	-	-
	QC 6/2008	5	16	-	-	-	-	-	-	-	-	-
<b>Tricaprin Internal Standard #2</b>												
Pyridine	US ACGIH 2/2010	1	-	-	-	-	-	-	-	-	-	-
	AB 4/2009	1	3.2	-	-	-	-	-	-	-	-	-
	BC 10/2009	1	-	-	-	-	-	-	-	-	-	-
	ON 7/2010	1	-	-	-	-	-	-	-	-	-	-
	QC 6/2008	5	16	-	-	-	-	-	-	-	-	-

### Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protection

**Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Other protection** : Not available.

## 9. Physical and chemical properties

<b>Physical state</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 2, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 3, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 4, in Pyridine	Liquid.
	ASTM® D6584 Standard Solution 5, in Pyridine	Liquid.
	Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Liquid. Liquid.
<b>Flash point</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Closed cup: 19.85°C (67.7°F)
	ASTM® D6584 Standard Solution 2, in Pyridine	Closed cup: 19.85°C (67.7°F)
	ASTM® D6584 Standard Solution 3, in Pyridine	Closed cup: 19.85°C (67.7°F)
	ASTM® D6584 Standard Solution 4, in Pyridine	Closed cup: 19.85°C (67.7°F)
	ASTM® D6584 Standard Solution 5, in Pyridine	Closed cup: 19.85°C (67.7°F)
	Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Closed cup: 19.85°C (67.7°F) Closed cup: 19.85°C (67.7°F)
<b>Auto-ignition temperature</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 4, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 5, in Pyridine	Not available.
	Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Not available. Not available.
<b>Flammable limits</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Lower: 1.8% Upper: 12.5%
	ASTM® D6584 Standard Solution 2, in Pyridine	Lower: 1.8% Upper: 12.5%
	ASTM® D6584 Standard Solution 3, in Pyridine	Lower: 1.8% Upper: 12.5%
	ASTM® D6584 Standard Solution 4, in Pyridine	Lower: 1.8% Upper: 12.5%
	ASTM® D6584 Standard Solution 5, in Pyridine	Lower: 1.8% Upper: 12.5%
	Butanediol Internal Standard #1 Tricaprin Internal Standard #2	Lower: 1.8% Upper: 12.5% Lower: 1.8% Upper: 12.5%
<b>Color</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 4, in Pyridine	Not available.
	ASTM® D6584 Standard Solution	Not available.

## 9. Physical and chemical properties

	5, in Pyridine	
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Odor</b>	: ASTM® D6584 Standard Solution	Not available.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	4, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	5, in Pyridine	
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>pH</b>	: ASTM® D6584 Standard Solution	Not available.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	4, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	5, in Pyridine	
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Boiling/condensation point</b>	: ASTM® D6584 Standard Solution	115°C (239°F)
	1, in Pyridine	
	ASTM® D6584 Standard Solution	115°C (239°F)
	2, in Pyridine	
	ASTM® D6584 Standard Solution	115°C (239°F)
	3, in Pyridine	
	ASTM® D6584 Standard Solution	115°C (239°F)
	4, in Pyridine	
	ASTM® D6584 Standard Solution	115°C (239°F)
	5, in Pyridine	
	Butanediol Internal Standard #1	115°C (239°F)
	Tricaprin Internal Standard #2	115°C (239°F)
<b>Melting/freezing point</b>	: ASTM® D6584 Standard Solution	-42°C (-43.6°F)
	1, in Pyridine	
	ASTM® D6584 Standard Solution	-42°C (-43.6°F)
	2, in Pyridine	
	ASTM® D6584 Standard Solution	-42°C (-43.6°F)
	3, in Pyridine	
	ASTM® D6584 Standard Solution	-42°C (-43.6°F)
	4, in Pyridine	
	ASTM® D6584 Standard Solution	-42°C (-43.6°F)
	5, in Pyridine	
	Butanediol Internal Standard #1	-42°C (-43.6°F)
	Tricaprin Internal Standard #2	-42°C (-43.6°F)
<b>Specific gravity</b>	: ASTM® D6584 Standard Solution	Not available.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	4, in Pyridine	



## 9. Physical and chemical properties

	ASTM® D6584 Standard Solution 5, in Pyridine	Not available.
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Vapor pressure</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 4, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 5, in Pyridine	Not available.
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Vapor density</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	2.73 [Air = 1]
	ASTM® D6584 Standard Solution 2, in Pyridine	2.73 [Air = 1]
	ASTM® D6584 Standard Solution 3, in Pyridine	2.73 [Air = 1]
	ASTM® D6584 Standard Solution 4, in Pyridine	2.73 [Air = 1]
	ASTM® D6584 Standard Solution 5, in Pyridine	2.73 [Air = 1]
	Butanediol Internal Standard #1	2.73 [Air = 1]
	Tricaprin Internal Standard #2	2.73 [Air = 1]
<b>Odor threshold</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 4, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 5, in Pyridine	Not available.
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Evaporation rate</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	1.37 (butyl acetate = 1)
	ASTM® D6584 Standard Solution 2, in Pyridine	1.37 (butyl acetate = 1)
	ASTM® D6584 Standard Solution 3, in Pyridine	1.37 (butyl acetate = 1)
	ASTM® D6584 Standard Solution 4, in Pyridine	1.37 (butyl acetate = 1)
	ASTM® D6584 Standard Solution 5, in Pyridine	1.37 (butyl acetate = 1)
	Butanediol Internal Standard #1	1.37 (butyl acetate = 1)
	Tricaprin Internal Standard #2	1.37 (butyl acetate = 1)
<b>Viscosity</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 2, in Pyridine	Not available.
	ASTM® D6584 Standard Solution 3, in Pyridine	Not available.
	ASTM® D6584 Standard Solution	Not available.

## 9. Physical and chemical properties

	4, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	5, in Pyridine	
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.
<b>Solubility</b>	: ASTM® D6584 Standard Solution	Not available.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	4, in Pyridine	
	ASTM® D6584 Standard Solution	Not available.
	5, in Pyridine	
	Butanediol Internal Standard #1	Not available.
	Tricaprin Internal Standard #2	Not available.

## 10. Stability and reactivity

<b>Chemical stability</b>	: ASTM® D6584 Standard Solution	The product is stable.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	The product is stable.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	The product is stable.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	The product is stable.
	4, in Pyridine	
	ASTM® D6584 Standard Solution	The product is stable.
	5, in Pyridine	
	Butanediol Internal Standard #1	The product is stable.
	Tricaprin Internal Standard #2	The product is stable.
<b>Conditions to avoid</b>	: ASTM® D6584 Standard Solution	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	1, in Pyridine	
	ASTM® D6584 Standard Solution	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	2, in Pyridine	
	ASTM® D6584 Standard Solution	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	3, in Pyridine	
	ASTM® D6584 Standard Solution	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	4, in Pyridine	
	ASTM® D6584 Standard Solution	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	5, in Pyridine	
	Butanediol Internal Standard #1	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources

## 10. Stability and reactivity

	Tricaprin Internal Standard #2	of ignition. Do not allow vapor to accumulate in low or confined areas. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
<b>Materials to avoid</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	ASTM® D6584 Standard Solution 2, in Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	ASTM® D6584 Standard Solution 3, in Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	ASTM® D6584 Standard Solution 4, in Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	ASTM® D6584 Standard Solution 5, in Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	Butanediol Internal Standard #1	Reactive or incompatible with the following materials: oxidizing materials
	Tricaprin Internal Standard #2	Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ASTM® D6584 Standard Solution 2, in Pyridine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ASTM® D6584 Standard Solution 3, in Pyridine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ASTM® D6584 Standard Solution 4, in Pyridine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ASTM® D6584 Standard Solution 5, in Pyridine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Butanediol Internal Standard #1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Tricaprin Internal Standard #2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Possibility of hazardous reactions</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.
	ASTM® D6584 Standard Solution 2, in Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.
	ASTM® D6584 Standard Solution 3, in Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.
	ASTM® D6584 Standard Solution 4, in Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.
	ASTM® D6584 Standard Solution 5, in Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.

## 10. Stability and reactivity

Butanediol Internal Standard #1

Under normal conditions of storage and use, hazardous reactions will not occur.

Tricaprin Internal Standard #2

Under normal conditions of storage and use, hazardous reactions will not occur.

## 11. Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>ASTM® D6584 Standard Solution 1, in Pyridine</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>ASTM® D6584 Standard Solution 2, in Pyridine</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>ASTM® D6584 Standard Solution 3, in Pyridine</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>ASTM® D6584 Standard Solution 4, in Pyridine</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>ASTM® D6584 Standard Solution 5, in Pyridine</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>Butanediol Internal Standard #1</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-
<b>Tricaprin Internal Standard #2</b> Pyridine	LC50 Inhalation Gas.	Rat	9010 ppm	1 hours
	LC50 Inhalation Gas.	Rat	4500 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-

### Chronic toxicity

**Conclusion/Summary** : Not available.

### Irritation/Corrosion

## 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>ASTM® D6584 Standard Solution 1, in Pyridine</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>ASTM® D6584 Standard Solution 2, in Pyridine</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>ASTM® D6584 Standard Solution 3, in Pyridine</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>ASTM® D6584 Standard Solution 4, in Pyridine</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>ASTM® D6584 Standard Solution 5, in Pyridine</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>Butanediol Internal Standard #1</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-
<b>Tricaprin Internal Standard #2</b> Pyridine	Skin - Mild irritant	Rabbit	-	-	-

### Sensitizer

**Conclusion/Summary** : Not available.

### Carcinogenicity

#### Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
<b>ASTM® D6584 Standard Solution 1, in Pyridine</b> Pyridine	A3	3	-	-	-	-
<b>ASTM® D6584 Standard Solution 2, in Pyridine</b> Pyridine	A3	3	-	-	-	-
<b>ASTM® D6584 Standard Solution 3, in Pyridine</b> Pyridine	A3	3	-	-	-	-
<b>ASTM® D6584 Standard Solution 4, in Pyridine</b> Pyridine	A3	3	-	-	-	-
<b>ASTM® D6584 Standard Solution 5, in Pyridine</b> Pyridine	A3	3	-	-	-	-
<b>Butanediol Internal Standard #1</b> Pyridine	A3	3	-	-	-	-

## 11. Toxicological information

Tricaprin Internal Standard #2 Pyridine	A3	3	-	-	-	-
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### Mutagenicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### **Other adverse symptoms**

ASTM® D6584 Standard Solution 1, in Pyridine	Adverse symptoms include the following: central nervous system depression , nausea or vomiting , headache , kidney abnormalities . Over-exposure may cause serious liver disorders.
ASTM® D6584 Standard Solution 2, in Pyridine	Adverse symptoms include the following: central nervous system depression , nausea or vomiting , headache , kidney abnormalities . Over-exposure may cause serious liver disorders.
ASTM® D6584 Standard Solution 3, in Pyridine	Adverse symptoms include the following: central nervous system depression , nausea or vomiting , headache , kidney abnormalities . Over-exposure may cause serious liver disorders.
ASTM® D6584 Standard Solution 4, in Pyridine	Adverse symptoms include the following: central nervous system depression , headache , nausea or vomiting , kidney abnormalities . Over-exposure may cause serious liver disorders.
ASTM® D6584 Standard Solution 5, in Pyridine	Adverse symptoms include the following: headache , nausea or vomiting , central nervous system depression , kidney abnormalities . Over-exposure may cause serious liver disorders.
Butanediol Internal Standard #1	Adverse symptoms include the following: central nervous system depression , nausea or vomiting , headache , kidney abnormalities . Over-exposure may cause serious liver disorders.
Tricaprin Internal Standard #2	Adverse symptoms include the following: central nervous system depression , headache , nausea or vomiting , kidney abnormalities . Over-exposure may cause serious liver disorders.

## 12. Ecological information

**Ecotoxicity** : May cause long-term adverse effects in the aquatic environment.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ASTM® D6584 Standard Solution 1, in Pyridine Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours
ASTM® D6584 Standard Solution 2, in Pyridine Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours



## 12. Ecological information

<b>ASTM® D6584 Standard Solution 3, in Pyridine</b> Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours
<b>ASTM® D6584 Standard Solution 4, in Pyridine</b> Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours
<b>ASTM® D6584 Standard Solution 5, in Pyridine</b> Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours
<b>Butanediol Internal Standard #1</b> Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours
<b>Tricaprin Internal Standard #2</b> Pyridine	Acute LC50 220000 ug/L Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 520000 ug/L Fresh water	Daphnia - Daphnia pulex - <24 hours	48 hours
	Acute LC50 26000 ug/L Fresh water	Fish - Cyprinus carpio - 4 to 5 cm	96 hours

**Conclusion/Summary** : Not available.

**Partition coefficient: n-octanol/water** : ASTM® D6584 Standard Solution 1, in Pyridine Not available.  
 ASTM® D6584 Standard Solution 2, in Pyridine Not available.  
 ASTM® D6584 Standard Solution 3, in Pyridine Not available.  
 ASTM® D6584 Standard Solution 4, in Pyridine Not available.  
 ASTM® D6584 Standard Solution 5, in Pyridine Not available.  
 Butanediol Internal Standard #1 Not available.  
 Tricaprin Internal Standard #2 Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## 13. Disposal considerations

### Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### RCRA classification




ASTM® D6584 Standard Solution 1, in Pyridine	D001; U196
ASTM® D6584 Standard Solution 2, in Pyridine	D001; U196
ASTM® D6584 Standard Solution 3, in Pyridine	D001; U196
ASTM® D6584 Standard Solution 4, in Pyridine	D001; U196
ASTM® D6584 Standard Solution 5, in Pyridine	D001; U196
Butanediol Internal Standard #1	D001, U196
Tricaprin Internal Standard #2	D001, U196

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>TDG</b>	UN1282	PYRIDINE solution	3	II		<b>Explosive Limit and Limited Quantity Index</b> 1 <b>Passenger Carrying Road or Rail Index</b> 5
<b>IMDG</b>	UN1282	PYRIDINE solution	3	II		<b>Emergency schedules (EmS)</b> F-E, S-D
<b>IATA</b>	UN1282	Pyridine solution	3	II		<b>Passenger and Cargo Aircraft</b> Quantity limitation: 5 L Packaging instructions: 305 <b>Cargo Aircraft Only</b> Quantity limitation:

## 14. Transport information

						60 L Packaging instructions: 307 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 1 L Packaging instructions: Y305  <b>Remarks</b> Excepted Quantity
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PG\* : Packing group

## 15. Regulatory information

<b>WHMIS (Canada)</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: ASTM® D6584 Standard Solution 2, in Pyridine	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: ASTM® D6584 Standard Solution 3, in Pyridine	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: ASTM® D6584 Standard Solution 4, in Pyridine	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: ASTM® D6584 Standard Solution 5, in Pyridine	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: Butanediol Internal Standard #1	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
	: Tricaprin Internal Standard #2	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).

### Canadian lists

- Canadian NPRI** : The following components are listed: Pyridine
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

## 16. Other information

<b>Label requirements</b>	: ASTM® D6584 Standard Solution 1, in Pyridine	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
	: ASTM® D6584 Standard Solution 2, in Pyridine	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT

## 16. Other information

ASTM® D6584 Standard Solution 3, in Pyridine	MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
ASTM® D6584 Standard Solution 4, in Pyridine	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
ASTM® D6584 Standard Solution 5, in Pyridine	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Butanediol Internal Standard #1	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Tricaprin Internal Standard #2	FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

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▣ Indicates information that has changed from previously issued version.

### Notice to reader

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