

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Assay Buffer (10X)

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 05/30/2008

Date Created: 05/30/2008

1. Product and Company Identification

Product Code: 10010993
Product Name: SIRT1 Direct Assay Buffer (10X)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium chloride	7447-40-7	0.2 %	No data.	No data.	No data.
2. Trizma base	77-86-1	6.0 %	No data.	No data.	No data.
3. Sodium chloride	7647-14-5	8.0 %	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	7791-18-6	0.2 %	No data.	No data.	No data.
5. Water	7732-18-5	85.6 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Potassium chloride	TS8050000	No data.	No data.	No data.	No data.
2. Trizma base	TY2900000	No data.	No data.	No data.	No data.
3. Sodium chloride	VZ4725000	No data.	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	OM2975000	No data.	No data.	No data.	No data.
5. Water	ZC0110000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

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SIRT1 Direct Assay Buffer (10X)

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: No data available.
Hazardous Decomposition Or Byproducts: No data available.
Hazardous Polymerization: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Polymerization: No data available.

11. Toxicological Information

: The toxicological effects of this compound have not been thoroughly studied.
Carcinogenicity/Other Information: No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name No data available.
Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium chloride	7447-40-7	No	No	No	No
2. Trizma base	77-86-1	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Potassium chloride	7447-40-7	No	No	Inventory	No
2. Trizma base	77-86-1	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	Inventory	No

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

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SIRT1 Direct (Human Recombinant)

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010994
Product Name: SIRT1 Direct (Human Recombinant)
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. SIRT1	NA	0.2 %	No data.	No data.	No data.
2. Sodium phosphate	7758-79-4	0.7 %	No data.	No data.	No data.
3. Sodium chloride	7647-14-5	0.6 %	No data.	No data.	No data.
4. Glycerol	56-81-5	20.0 %	No data.	10 mg/m3	No data.
5. Water	7732-18-5	78.5 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. SIRT1	NA	No data.	No data.	No data.	No data.
2. Sodium phosphate	NA	No data.	No data.	No data.	No data.
3. Sodium chloride	VZ4725000	No data.	No data.	No data.	No data.
4. Glycerol	MA8050000	No data.	No data.	No data.	No data.
5. Water	ZC0110000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

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SIRT1 Direct (Human Recombinant)

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Flammable Properties and Hazards: No data available.
Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.
Unsuitable Extinguishing Media: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
After removal, ventilate contaminated area and flush thoroughly with water.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.
Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
Avoid contact with eyes, skin, and clothing.
Avoid prolonged or repeated exposure.
Do not reuse this container.
Use with adequate ventilation.
Wash thoroughly after handling.
Precautions To Be Taken in Storing: Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information: Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type): No data available.
Eye Protection: Safety glasses
Protective Gloves: Latex disposable gloves
Other Protective Clothing: Lab coat
Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices: Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Melting Point: No data.
Boiling Point: No data.
Autoignition Pt: No data.
Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Specific Gravity (Water = 1): No data.
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: No data.
Corrosion Rate: No data.
pH: No data.
Appearance and Odor: A clear, colorless solution

MATERIAL SAFETY DATA SHEET

SIRT1 Direct (Human Recombinant)

10. Stability and Reactivity

Stability: Unstable [] Stable []

Conditions To Avoid - Instability: No data available.

Incompatibility - Materials To Avoid: No data available.

Hazardous Decomposition Or Byproducts: No data available.

Hazardous Polymerization: Will occur [] Will not occur []

Conditions To Avoid - Hazardous Polymerization: No data available.

11. Toxicological Information

: The toxicological effects of this compound have not been thoroughly studied.

Carcinogenicity/Other Information: No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: No data available.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. SIRT1	NA	No	No	No	No
2. Sodium phosphate	7758-79-4	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Glycerol	56-81-5	No	No	No	No
5. Water	7732-18-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. SIRT1	NA	No	No	No	No
2. Sodium phosphate	7758-79-4	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Glycerol	56-81-5	No	No	Inventory	No
5. Water	7732-18-5	No	No	Inventory	No

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Peptide

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010995
Product Name: SIRT1 Direct Peptide
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium chloride	7447-40-7	0.02 %	No data.	No data.	No data.
2. Trizma base	77-86-1	0.6 %	No data.	No data.	No data.
3. Sodium chloride	7647-14-5	0.8 %	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	7791-18-6	0.02 %	No data.	No data.	No data.
5. Water	7732-18-5	98.16 %	No data.	No data.	No data.
6. Nicotinamide	98-92-0	0.4 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Potassium chloride	TS8050000	No data.	No data.	No data.	No data.
2. Trizma base	TY2900000	No data.	No data.	No data.	No data.
3. Sodium chloride	VZ4725000	No data.	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	OM2975000	No data.	No data.	No data.	No data.
5. Water	ZC0110000	No data.	No data.	No data.	No data.
6. Nicotinamide	QS3675000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Peptide

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5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Flammable Properties and Hazards:	May emit toxic fumes under fire conditions.
Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.
Unsuitable Extinguishing Media:	No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. After removal, ventilate contaminated area and flush thoroughly with water.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Storing:	Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information:	Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	No data available.
Eye Protection:	Safety glasses
Protective Gloves:	Latex disposable gloves
Other Protective Clothing:	Lab coat
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Peptide

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Solubility in Water:	No data.
Percent Volatile:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	A clear, colorless solution

10. Stability and Reactivity

Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition Or Byproducts:	No data available.
Hazardous Polymerization:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Polymerization:	No data available.

11. Toxicological Information

:	The toxicological effects of this compound have not been thoroughly studied.
Carcinogenicity/Other Information:	No data available.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	No data available.
Additional Transport Information:	Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium chloride	7447-40-7	No	No	No	No
2. Trizma base	77-86-1	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	No	No
6. Nicotinamide	98-92-0	No	No	Yes-Cat. N503	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Potassium chloride	7447-40-7	No	No	Inventory	No
2. Trizma base	77-86-1	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	Inventory	No
6. Nicotinamide	98-92-0	No	No	Inventory	No

16. Other Information

Company Policy or Disclaimer

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DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct NAD+

Page: 1

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010996
Product Name: SIRT1 Direct NAD+
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium chloride	7447-40-7	0.02 %	No data.	No data.	No data.
2. Trizma base	77-86-1	0.6 %	No data.	No data.	No data.
3. Sodium chloride	7647-14-5	0.8 %	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	7791-18-6	0.02 %	No data.	No data.	No data.
5. Water	7732-18-5	94.96 %	No data.	No data.	No data.
6. Adenosine 5'-(trihydrogen diphosphate),P'.fwdarw.5'-ester with3-(aminocarbonyl)-1-.beta.-D-ribofura	53-84-9	3.6 %	No data.	No data.	No data.

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Potassium chloride	TS8050000	No data.	No data.	No data.	No data.
2. Trizma base	TY2900000	No data.	No data.	No data.	No data.
3. Sodium chloride	VZ4725000	No data.	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	OM2975000	No data.	No data.	No data.	No data.
5. Water	ZC0110000	No data.	No data.	No data.	No data.
6. Adenosine 5'-(trihydrogen diphosphate),P'.fwdarw.5'-ester with3-(aminocarbonyl)-1-.beta.-D-ribofura	UU3450000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Flammable Properties and Hazards: May emit toxic fumes under fire conditions.

Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.

Unsuitable Extinguishing Media: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
 Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
 After removal, ventilate contaminated area and flush thoroughly with water.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
 Wash thoroughly after handling.

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
 Avoid contact with eyes, skin, and clothing.
 Avoid prolonged or repeated exposure.
 Do not reuse this container.
 Use with adequate ventilation.
 Wash thoroughly after handling.

Precautions To Be Taken in Storing: Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information: Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): No data available.

Eye Protection: Safety glasses

Protective Gloves: Latex disposable gloves

Other Protective Clothing: Lab coat

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices: Do not take internally.
 Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Melting Point: No data.

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Specific Gravity (Water = 1): No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Evaporation Rate (vs Butyl Acetate=1): No data.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct NAD+

Solubility in Water: No data.
Percent Volatile: No data.
Corrosion Rate: No data.
pH: No data.
Appearance and Odor: A clear, colorless solution

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: No data available.
Hazardous Decomposition Or Byproducts: No data available.
Hazardous Polymerization: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Polymerization: No data available.

11. Toxicological Information

: The toxicological effects of this compound have not been thoroughly studied.
Carcinogenicity/Other Information: No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name No data available.
Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium chloride	7447-40-7	No	No	No	No
2. Trizma base	77-86-1	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	No	No
6. Adenosine 5'-(trihydrogen diphosphate),P'.fwdarw.5'-ester with3-(aminocarbonyl)-1-.beta.-D-ribofura	53-84-9	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Potassium chloride	7447-40-7	No	No	Inventory	No
2. Trizma base	77-86-1	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	Inventory	No
6. Adenosine 5'-(trihydrogen diphosphate),P'.fwdarw.5'-ester with3-(aminocarbonyl)-1-.beta.-D-ribofura	53-84-9	No	No	Inventory	No

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Nicotinamide

Page: 1

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010997
Product Name: SIRT1 Direct Nicotinamide
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Potassium chloride	7447-40-7	0.02 %	No data.	No data.	No data.
2. Trizma base	77-86-1	0.6 %	No data.	No data.	No data.
3. Sodium chloride	7647-14-5	0.8 %	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	7791-18-6	0.02 %	No data.	No data.	No data.
5. Water	7732-18-5	97.96 %	No data.	No data.	No data.
6. Nicotinamide	98-92-0	0.6 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Potassium chloride	TS8050000	No data.	No data.	No data.	No data.
2. Trizma base	TY2900000	No data.	No data.	No data.	No data.
3. Sodium chloride	VZ4725000	No data.	No data.	No data.	No data.
4. Magnesium chloride, hexahydrate	OM2975000	No data.	No data.	No data.	No data.
5. Water	ZC0110000	No data.	No data.	No data.	No data.
6. Nicotinamide	QS3675000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Flammable Properties and Hazards:	May emit toxic fumes under fire conditions.
Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.
Unsuitable Extinguishing Media:	No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. After removal, ventilate contaminated area and flush thoroughly with water.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Storing:	Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information:	Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	No data available.
Eye Protection:	Safety glasses
Protective Gloves:	Latex disposable gloves
Other Protective Clothing:	Lab coat
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Nicotinamide

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Printed: 06/03/2008
Revision: 06/02/2008

Solubility in Water:	No data.
Percent Volatile:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	A clear, colorless solution

10. Stability and Reactivity

Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition Or Byproducts:	No data available.
Hazardous Polymerization:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Polymerization:	No data available.

11. Toxicological Information

:	The toxicological effects of this compound have not been thoroughly studied.
Carcinogenicity/Other Information:	No data available.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	No data available.
Additional Transport Information:	Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III					
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium chloride	7447-40-7	No	No	No	No
2. Trizma base	77-86-1	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	No	No
6. Nicotinamide	98-92-0	No	No	Yes-Cat. N503	No

US EPA CAA, CWA, TSCA					
Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Potassium chloride	7447-40-7	No	No	Inventory	No
2. Trizma base	77-86-1	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Magnesium chloride, hexahydrate	7791-18-6	No	No	No	No
5. Water	7732-18-5	No	No	Inventory	No
6. Nicotinamide	98-92-0	No	No	Inventory	No

16. Other Information

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MATERIAL SAFETY DATA SHEET

SIRT1 Direct Developer

Page: 1

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010998
Product Name: SIRT1 Direct Developer
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV
1. SIRT1 Direct Developer	NA	100.0 %	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.
Medical Conditions Generally Aggravated By Exposure: May cause allergic respiratory and skin reactions.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Flammable Properties and Hazards: No data available.
Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.
Unsuitable Extinguishing Media: No data available.

MATERIAL SAFETY DATA SHEET

SIRT1 Direct Developer

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Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	No data available.
Hazardous Polymerization:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Polymerization:	No data available.

11. Toxicological Information

:	The toxicological effects of this compound have not been thoroughly studied.
	SIRT1 Direct Developer - Toxicity Data: LD50 Oral (rat): 5,000 mg/kg
Carcinogenicity/Other Information:	No data available.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	No data available.
Additional Transport Information:	Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III					
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. SIRT1 Direct Developer	NA	No	No	No	No
US EPA CAA, CWA, TSCA					
Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. SIRT1 Direct Developer	NA	No	No	No	No

16. Other Information

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MATERIAL SAFETY DATA SHEET

SIRT1 Direct Fluorophore

Page: 1

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 06/03/2008
Revision: 06/02/2008

Date Created: 06/02/2008

1. Product and Company Identification

Product Code: 10010999
Product Name: SIRT1 Direct Fluorophore
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. 7-Amino-4-methylcoumarin	26093-31-2	0.0 -10.0 %	No data.	No data.	No data.
2. Dimethyl sulfoxide, anhydrous	67-68-5	90.0 -100.0 %	No data.	No data.	No data.

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. 7-Amino-4-methylcoumarin	NA	No data.	No data.	No data.	No data.
2. Dimethyl sulfoxide, anhydrous	PV6210000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties.
Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body.
Irritating to the skin, eyes, nose, throat, and respiratory tract.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
The toxicological properties of this compound have not been fully evaluated.

LD 50 / LC 50: Please refer to Section 11

Signs and Symptoms Of Exposure: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
May cause central nervous system effects (such as fatigue, nausea, vomiting, sedation, dizziness, and headache).
May cause garlic smell on the breath and body.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt:	87.80 C Method Used: Closed Cup
Explosive Limits:	LEL: 2.6% at 25.0 C UEL: 42% at 25.0 C
Autoignition Pt:	215.00 C
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Note: combustible as diluted in dimethyl sulfoxide
Flammable Properties and Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Combustible liquid and vapor. Container explosion may occur under fire conditions. Irritating and highly toxic gases may be generated by thermal decomposition or combustion. May cause exothermic reaction when combined with certain chemicals. On mixing with potassium permanganate it will flash instantaneously. Reacts violently with other acids. Vapors can travel to a source of ignition and flash back.
Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.
Unsuitable Extinguishing Media:	No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. After removal, ventilate contaminated area and flush thoroughly with water. Avoid release into the environment - very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not reuse this container. Hygroscopic. Keep away heat and flame. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Storing:	Keep away from incompatible substances. Keep away from sources of ignition. Keep tightly closed. Protect from moisture. Store at correct temperature. Store in a cool, dry, well-ventilated area.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information:	Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood
Respiratory Equipment (Specify Type):	No data available.
Eye Protection:	Safety glasses
Protective Gloves:	Latex disposable gloves
Other Protective Clothing:	Lab coat

Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	215.00 C
Flash Pt:	87.80 C Method Used: Closed Cup
Explosive Limits:	LEL: 2.6% at 25.0 C UEL: 42% at 25.0 C
Specific Gravity (Water = 1):	No data.
Vapor Pressure (vs. Air or mm Hg):	0.46 MM_HG at 20.0 C
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.
Corrosion Rate:	No data.
pH:	No data.
Appearance and Odor:	A clear, colorless solution

10. Stability and Reactivity

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Conditions To Avoid - Instability:	protect from moisture
Incompatibility - Materials To Avoid:	acid chlorides strong acids strong bases strong oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon monoxide carbon dioxide formaldehyde sulfur oxides
Hazardous Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Conditions To Avoid - Hazardous Polymerization:	No data available.

11. Toxicological Information

:	The toxicological effects of this compound have not been thoroughly studied.
	DMSO - Toxicity Data: Oral (rat) LD50:14,500 mg/kg Skin (rat) LD50:40,000 mg/kg Oral (mouse) LD50:7,920 mg/kg
Carcinogenicity/Other Information:	No data available.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

:	Avoid release into the environment - very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Runoff from fire control or dilution water may cause pollution.
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MATERIAL SAFETY DATA SHEET
SIRT1 Direct Fluorophore

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Combustible liquid, n.o.s.

DOT Hazard Class: Combustible liquid

DOT Hazard Label: Combustible liquid, n.o.s.

UN/NA Number: 1993

Packing Group: III

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. 7-Amino-4-methylcoumarin	26093-31-2	No	No	No	No
2. Dimethyl sulfoxide, anhydrous	67-68-5	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. 7-Amino-4-methylcoumarin	26093-31-2	No	No	Inventory	No
2. Dimethyl sulfoxide, anhydrous	67-68-5	No	No	Inventory	No

16. Other Information

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