



# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 15/01/2018

Revision date: 19/06/2018

Supersedes: 15/01/2018

Version: 1.1

CLM-4555-A-S

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixtures  
Product name : NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)  
Product code : CLM-4555-A-S

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Acute Tox. 4 (Oral) H302  
Acute Tox. 4 (Dermal) H312  
Acute Tox. 4 (Inhalation:vapour) H332  
Eye Irrit. 2 H319

Full text of hazard classes and H-statements : see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11  
Xn; R20/21/22  
Xi; R36

Full text of R-phrases: see section 16

#### GHS-US classification

Flam. Liq. 2 H225  
Acute Tox. 4 (Oral) H302  
Acute Tox. 4 (Dermal) H312  
Acute Tox. 4 (Inhalation:vapour) H332  
Eye Irrit. 2A H319

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

Lungs, Blood, Kidney, Liver, Central nervous system.

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

ACETONITRILE UNLABELED

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour  
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled  
H319 - Causes serious eye irritation

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/bond container and receiving equipment.  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P261 - Avoid breathing fume, mist, spray, vapors.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.

#### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapour  
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled  
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing fume, mist, spray, vapors.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P301+P312 - If swallowed: Call a doctor if you feel unwell  
P302+P352 - If on skin: Wash with plenty of water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a doctor if you feel unwell  
P321 - Specific treatment (see Hazardous component(s) for labeling on this label)  
P330 - Rinse mouth.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), dry extinguishing powder to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards

No additional information available

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3 (REACH-no) 01-2119471307-38	99.987	F; R11 Xi; R36 Xn; R20/21/22
NNK (1,2',3',4',5',6'-13C6, 99%)	(CAS-No.) 64091-91-4 (Unlabeled) (EC Index-No.)	0.013	Carc.Cat.3; R40 T; R25 R43

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8 (EC-No.) 200-835-2 (EC Index-No.) 608-001-00-3 (REACH-no) 01-2119471307-38	99.987	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
NNK (1,2',3',4',5',6'-13C6, 99%)	(CAS-No.) 64091-91-4 (Unlabeled) (EC Index-No.)	0.013	Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Carc. 2, H351

Name	Product identifier	%	GHS-US classification
ACETONITRILE UNLABELED	(CAS-No.) 75-05-8	99.987	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
NNK (1,2',3',4',5',6'-13C6, 99%)	(CAS-No.) 64091-91-4 (Unlabeled)	0.013	Acute Tox. 3 (Oral), H301 Skin Sens. 1, H317 Carc. 2, H351

Full text of R- and H- phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Evacuate area.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Reactivity : Vapors may form explosive mixture with air.

### 5.3. Advice for firefighters

Firefighting instructions : Wear a self contained breathing apparatus. Fight fire with normal precautions from a reasonable distance.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves.

Other information : Use water spray to cool exposed surfaces.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Avoid breathing vapors, mist, gas. Ensure adequate air ventilation. Evacuate unnecessary personnel. Eliminate all ignition sources if safe to do so. Provide adequate ventilation to minimize dust and/or vapor concentrations. Special attention should be given to low areas/pits where flammable vapors can accumulate.

#### 6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Dike and contain spill. Disposal should be in accordance with applicable Federal, State and local regulations.

Methods for cleaning up : Collect spillage. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Store in freezer (-80°C). Protect from light, air and moisture.

Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	34 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	20 ppm
USA NIOSH	Remark (NIOSH)	Forms Cyanide in the body.
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm
USA OSHA	Remark (OSHA)	The value in mg/m <sup>3</sup> is approximate.

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### ACETONITRILE UNLABELED (75-05-8)

Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.00000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	34 mg/m <sup>3</sup> Forms Cyanide in the body.
USA NIOSH	NIOSH REL (TWA) (ppm)	20 ppm Forms Cyanide in the body.
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup> The value in mg/m <sup>3</sup> is approximate.
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm The value in mg/m <sup>3</sup> is approximate.

### 8.2. Exposure controls

- Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety procedures.  
Personal protective equipment : Gloves. Protective goggles. Protective clothing. Self-contained breathing apparatus.



- Materials for protective clothing : Wear suitable protective clothing and gloves.  
Hand protection : Wear suitable protective clothing and gloves.  
Eye protection : Chemical goggles or face shield with safety glasses.  
Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.  
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.  
Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

- Physical state : Liquid  
Appearance : Liquid, clear  
Molecular mass : 41.05 g/mol  
Color : Colorless  
Odor : Ether-like  
Odor threshold : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : -48 °C (-54 °F)  
Freezing point : No data available  
Boiling point : 81 - 82 °C (178 - 180 °F)  
Flash point : 2 °C (35.6 °F) - closed cup  
Auto-ignition temperature : 523 °C (973 °F)  
Decomposition temperature : No data available  
Flammability (solid, gas) : Highly flammable liquid and vapour  
Vapor pressure : 73.18 hPa (54.89 mmHg) at 15°C (59 °F), 119.81 hPa (89.86 mmHg) at 25°C(77 °F)  
Relative vapor density at 20 °C : 1.42 - (Air = 1.0)  
Relative density : No data available  
Specific gravity / density : 0.786 g/ml  
Solubility : Water: 100 %  
Log Pow : -0.34  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Explosion limits : 4.4 - 16 vol %

### 9.2. Other information

No additional information available

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Vapors may form explosive mixture with air.

#### 10.2. Chemical stability

See storage and expiration date on CoA.

#### 10.3. Possibility of hazardous reactions

Highly flammable liquid and vapour.

#### 10.4. Conditions to avoid

Open flame. Direct sunlight.

#### 10.5. Incompatible materials

Acids. Alkali metals. Bases. Oxidizing agent. Reducing agents.

#### 10.6. Hazardous decomposition products

May release flammable gases. Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation:vapour: Harmful if inhaled.

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
LD50 oral rat	2460 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l
LC50 inhalation rat (ppm)	7551 ppm - 8h
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	2000.000 mg/kg body weight
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	26.800 mg/l/4h

ACETONITRILE UNLABELED (75-05-8)	
LD50 oral rat	2460 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l
LC50 inhalation rat (ppm)	7551 ppm - 8h
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	2000.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h

NNK (1,2',3',4',5',6'-13C6, 99%) (64091-91-4 (Unlabeled))	
ATE CLP (oral)	100.000 mg/kg body weight
Additional information	LD50 Intraperitoneal - Mouse - 1,000 mg/kg

Skin corrosion/irritation : Not classified  
Skin  
Rabbit  
No skin irritation

Serious eye damage/irritation : Causes serious eye irritation.  
Rabbit  
Eyes  
Irritating to eyes

Respiratory or skin sensitization : Did not cause sensitization on laboratory animals. Buehler Test - guinea pig - Did not cause sensitization on laboratory animals. (OECD 406 method)

Germ cell mutagenicity : Not classified

Carcinogenicity : No evidence of carcinogenicity in animal studies (when indicated).

Reproductive toxicity : Animal testing did not show any effects on fertility.

Specific target organ toxicity – single exposure : Not classified  
The substance or mixture is not classified as specific target organ toxicant.

Specific target organ toxicity – repeated exposure : Not classified  
The substance or mixture is not classified as specific target organ toxicant.

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions. The onset of symptoms is generally delayed pending conversion to cyanide. Nausea, Vomiting, Diarrhea, Headache, Dizziness, Rash, Cyanosis, Excitement, Depression, Drowsiness, Impaired judgment, Lack of coordination, Stupor, Death. Lungs - Lung edema - Based on human evidence. Harmful if swallowed. Harmful in contact with skin. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/l Daphnia magna (Water flea) - 48h
NOEC (chronic)	640 mg/l Daphnia magna (Water flea) - 14d

ACETONITRILE UNLABELED (75-05-8)	
LC50 fish 1	1640 mg/l Pimephales promelas (fathead minnow) - 96h
EC50 Daphnia 1	3600 mg/l Daphnia magna (Water flea) - 48h
NOEC (chronic)	640 mg/l Daphnia magna (Water flea) - 14d

### 12.2. Persistence and degradability

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
Persistence and degradability	Readily biodegradable.

ACETONITRILE UNLABELED (75-05-8)	
Persistence and degradability	Biodegradability Result: - Readily biodegradable.

### 12.3. Bioaccumulative potential

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
Log Pow	-0.34
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4). There is no bioaccumulation. Log Pow.

ACETONITRILE UNLABELED (75-05-8)	
Log Pow	-0.34
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).

NNK (1,2',3',4',5',6'-13C6, 99%) (64091-91-4 (Unlabeled))	
Log Pow	0.53

### 12.4. Mobility in soil

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
Ecology - soil	Not expected to absorb on soil.

ACETONITRILE UNLABELED (75-05-8)	
Ecology - soil	Not expected to absorb on soil.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations. May cause long lasting harmful effects to aquatic life. Avoid release to the environment.



# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
- Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- Additional information : Handle empty containers with care because residual vapors are flammable.
- Ecology - waste materials : Dispose of as unused product.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

- UN-No.(DOT) : 1648
- DOT NA no. UN1648

#### 14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Acetonitrile
- Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Hazard labels (DOT) : 3 - Flammable liquid



- Packing group (DOT) : II - Medium Danger
- DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242

#### 14.3. Additional information

- Emergency Response Guide (ERG) Number : 127
- Other information : No supplementary information available.

#### Overland transport

- Packing group (ADR) : II
- Class (ADR) : 3 - Flammable liquid
- Hazard identification number (Kemler No.) : 33
- Classification code (ADR) : F1
- Hazard labels (ADR) : 3 - Flammable liquids



- Orange plates : An orange rectangular label with a black border. It contains the number "33" in the top half and "1648" in the bottom half, both in black text.

- Tunnel restriction code (ADR) : D/E



# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Limited quantities (ADR)	: 11
EAC	: •2YE
Excepted quantities (ADR)	: E2

### Transport by sea

DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
MFAG-No	: 127

### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
Civil Aeronautics Law	: Flammable liquids

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
ACETONITRILE UNLABELED (75-05-8)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313
NNK (1,2',3',4',5',6'-13C6, 99%) (64091-91-4 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.

### 15.2. International regulations

#### CANADA

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)
Listed on the Canadian DSL (Domestic Substances List)

#### 15.2.1. National regulations

No additional information available

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 15.3. US State regulations

NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

ACETONITRILE UNLABELED (75-05-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

NNK (1,2',3',4',5',6'-13C6, 99%) (64091-91-4 (Unlabeled))				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	

ACETONITRILE UNLABELED (75-05-8)				
State or local regulations				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				

NNK (1,2',3',4',5',6'-13C6, 99%) (64091-91-4 (Unlabeled))				
State or local regulations				
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				

## SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Sens. 1	Skin sensitization, Category 1
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H302	Harmful if swallowed
H312	Harmful in contact with skin
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
R11	Highly flammable

# NNK 100 UG/ML IN ACETONITRILE (1,2',3',4',5',6'-13C6, 99%)

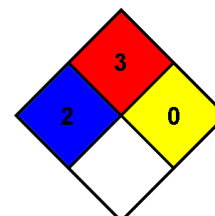
CLM-4555-A-S

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R25	Toxic if swallowed
R36	Irritating to eyes
R40	Limited evidence of a carcinogenic effect
R43	May cause sensitization by skin contact
F	Highly flammable
T	Toxic
Xi	Irritant
Xn	Harmful

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



### Hazard Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 3 Serious Hazard
- Physical : 0 Minimal Hazard

### CIL Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*