OTAL

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2017-02-21 Revision date: 2018-03-20 Version: 2.0

SECTION 1: Identification

1.1. Product identifier

Product name : OTAL

Product code : Not available

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

Use of the substance/mixture : Ochratoxin A calibration solution CRM, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1200 Montreal Road
Ottawa, K1A 0R6 - Canada
T 613-993-2359

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Flammable Liquid 2
Acute Toxicity 3 (Oral)
Acute Toxicity 3 (Dermal)
Acute Toxicity 3 (Inhalation)
Eye Irritation 2A

2.2. Label elements

GHS labelling

Hazard pictograms (GHS) :

GHS02 GHS06 GHS07

Signal word (GHS) : Danger

Hazard statements (GHS) : Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes serious eye irritation.

Precautionary statements (GHS) : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a poison center/doctor if you feel unwell. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep cool. Store locked up.

Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Acetonitrile	(CAS No) 75-05-8	99.8995
Formic acid	(CAS-No.) 64-18-6	0.1
Ochratoxin A	(CAS No) 303-47-9	0.0005

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a poison center or a doctor if you feel unwell.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries after inhalation : Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.

Symptoms/injuries after skin contact : Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : Toxic if swallowed. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate sources of ignition. Use special care to avoid static electric charges. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Dike and contain spill. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Precautions for safe handling : Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Do not get in eyes, on skin, or on clothing. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. Use only non-sparking tools. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep locked up and out of reach of children. Keep container tightly closed. Keep cool. Store in a well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetonitrile (75-05-8)		
ACGIH	ACGIH TWA (ppm)	20 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	70 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	40 ppm
IDLH	US IDLH (ppm)	500 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	34 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	20 ppm

Formic acid (64-18-6)		
ACGIH	ACGIH TWA (ppm)	5 ppm
ACGIH	ACGIH STEL (ppm)	10 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	9 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	5 ppm
IDLH	US IDLH (ppm)	30 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	9 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	5 ppm

Ochratoxin A (303-47-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. 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.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear liquid

Colour : No data available

Odour : No data available

Odour threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Highly flammable liquid and vapour

Explosive limits : No data available

Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed, in contact with skin or if inhaled.

OTAL	
LD50 oral rat	50 - 300 mg/kg
LD50 dermal rabbit	200 - 1000 mg/kg
LC50 inhalation rat	2 - 10 mg/L/4h (Calculated using ATE values)

Acetonitrile (75-05-8)	
LD50 oral rat	160 mg/kg
LD50 dermal rabbit	390 mg/kg

Formic acid (64-18-6)	
LD50 oral rat	1100 mg/kg
LC50 inhalation rat	15 g/m³ (Exposure time: 15 min)

Ochratoxin A (303-47-9)	
LD50 oral rat	20 mg/kg

Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.

Ochratoxin A (303-47-9)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen

Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.
Symptoms/injuries after skin contact	: Toxic in contact with skin. May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: Toxic if swallowed. Ingestion may cause headache, dizziness, drowsiness, metabolic acidosis, coma, seizures.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Acetonitrile (75-05-8)	
LC50 fish 1	1600 - 1690 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	1000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

Formic acid (64-18-6)	
EC50 Daphnia 1	120 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	138 - 165.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2. Persistence and degradability

OTAL	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

OTAL	
Bioaccumulative potential	Not established.

Acetonitrile (75-05-8)	
Partition coefficient n-octanol/water	-0.34

Formic acid (64-18-6)	
BCF fish 1	0.22
Partition coefficient n-octanol/water	-0.54

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

UN-No.(DOT/TDG) : UN1648

Proper Shipping Name (DOT/TDG) : Acetonitrile

Class (DOT/TDG) : 3

Hazard labels (DOT/TDG) :

Packing group (DOT/TDG) : II

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Ochratoxin A	CAS No 303-47-9

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Ochratoxin A	CAS No 303-47-9

Acetonitrile (75-05-8)	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1.0 %

Formic acid (64-18-6)	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue	:	2017-02-21
Revision date	:	2018-03-20
Version #	:	2.0
Prepared by	:	Nexreg Compliance Inc.

DISCLAIMER:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural, or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. Apart from the solvent in this product (if applicable), the hazardous components present in the solution are at such low concentrations that exact determination of degree of hazard is not warranted and would be misleading. We shall not be held liable for any damage resulting from handling or from contact with the above product.