

4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 14/09/2015

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Version: 1.0

ULM-7309-S

SECTION 1. Identification	of the substance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Mixture
Product name.	: 4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE
Product code	: ULM-7309-S
1.2. Relevant identified use	es of the substance or mixture and uses advised against
1.2.1. Relevant identified use	2S
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	of the safety data sheet
Cambridge Isotope Laboratories, Ir	
50 Frontage Road	
Andover, MA 01810 USA	
USA: 1-800-322-1174 Int: 1-978	3-749-8000
cilsales@isotope.com www.isoto	
Emergency telephone r	number
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hc	
International: 1-703-741-5970 (24	ł hours)
SECTION 2: Hazards ident	tification
2.1. Classification of the su	Ibstance or mixture
Classification according to Regu	Jlation (EC) No. 1272/2008 [CLP]
• •	ulation (EC) No. 1272/2008 [CLP] H225
Flam. Liq. 2	
Flam. Liq. 2 Acute Tox. 4 (Oral)	H225
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist)	H225 H302 H312
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal)	H225 H302 H312
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2	H225 H302 H312 H332 H319
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2	H225 H302 H312 H332 H319 16
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section	H225 H302 H312 H332 H319 16
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section Classification according to Direct	H225 H302 H312 H332 H319 16 Ctive 67/548/EEC or 1999/45/EC
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section Classification according to Direct F; R11	H225 H302 H312 H332 H319 16 Ctive 67/548/EEC or 1999/45/EC
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section Classification according to Direct F; R11 Full text of R-phrases: see section	H225 H302 H312 H332 H319 16 Ctive 67/548/EEC or 1999/45/EC
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section Classification according to Direc F; R11 Full text of R-phrases: see section GHS-US classification Flam. Liq. 2 Acute Tox. 4 (Oral)	H225 H302 H312 H332 H319 16 Ctive 67/548/EEC or 1999/45/EC 16 H225 H302
Flam. Liq. 2 Acute Tox. 4 (Oral) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation:dust,mist) Eye Irrit. 2 Full text of H-phrases: see section Classification according to Direct F; R11 Full text of R-phrases: see section GHS-US classification Flam. Liq. 2	H225 H302 H312 H312 H319 16 Ctive 67/548/EEC or 1999/45/EC 16 H225 H302 H312

Adverse physicochemical, human health and environmental effects

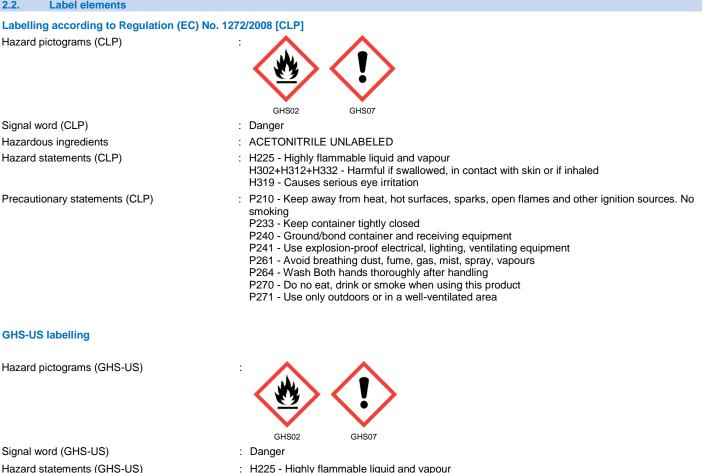
Lungs, Blood, Kidney, Liver, Central nervous system.

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2.2. **Label elements**



- H225 Highly flammable liquid and vapour H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled H319 - Causes serious eye irritation
- : 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 dust, gas, fume, mist, spray, vapours
 - P264 Wash Both hands thoroughly after handling
 - P270 Do no eat, drink or smoke when using this product
 - P271 Use only outdoors or in a well-ventilated area

P280 - Wear eye protection, protective clothing, face protection, protective gloves

P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position 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 POISON CENTER/doctor/physician if you feel unwell
- P321 Specific treatment (see Hazard pictograms (CLP) on this label)
- P330 If swallowed, rinse mouth
- P337+P313 If eve 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., Dry chemical, Water spray for extinction

P403+P235 - Store in a well-ventilated place. Keep cool

P501 - Dispose of contents/container to Comply with applicable regulations.

Other hazards 23

No additional information available

Precautionary statements (GHS-US)

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

		0/	
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	99.9873	F; R11 Xi; R36 Xn; R20/21/22
4-METHYLUMBELLIFERONE UNLABELED	(CAS No) 90-33-5 (EC no) 201-986-7	0.0127	Xi; R36/37/38
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	99.9873	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319
4-METHYLUMBELLIFERONE UNLABELED	(CAS No) 90-33-5 (EC no) 201-986-7	0.0127	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Name	Product identifier	%	GHS-US classification
ACETONITRILE UNLABELED	(CAS No) 75-05-8	99.9873	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319

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

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Specific measures (see Hazard pictograms (CLP) on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER/doctor/physician if you feel unwell.
4.2. Most important symptoms and effect	s, both acute and delayed
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.
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	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2. Special hazards arising from the sub	stance or mixture
Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
5.3. Advice for firefighters	
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment and emergency procedures			
General measures	: Remove ignition source: smoking.	s. Use special care to avoid static electric charges. No naked lights. No	
6.1.1. For non-emergency No additional information availab			
6.1.2. For emergency respo	onders		
No additional information available			
6.2. Environmental preca	utions		
Prevent further leakage or spilla	ge if safe to do so. Do not let product enter d	Irains.	
6.3. Methods and materia	al for containment and cleaning up		
For containment		en collect with an electrically protected vacuum cleaner or by wet- ontainer for disposal according to local regulations.	
6.4. Reference to other set	ections		
No additional information availab	ble		
SECTION 7: Handling ar	nd storage		
7.1. Precautions for safe	handling		
Additional hazards when process	sed : Handle empty container	s with care because residual vapours are flammable.	
Precautions for safe handling		oking. Use only non-sparking tools. Use only outdoors or in a well- reathing dust, mist or spray.	
Hygiene measures	: Do no eat, drink or smol	ke when using this product. Wash Both hands thoroughly after handling.	
7.2. Conditions for safe s	storage, including any incompatibilities		
Storage conditions	: Store at room temperatu	ure away from light and moisture.	
Incompatible materials	: Heat sources.		
7.3. Specific end use(s)			
No additional information available	le		
SECTION 8: Exposure c	ontrols/personal protection		
8.1. Control parameters			
4-METHYLUMBELLIFERONE	UNLABELED 100 UG/ML IN ACETONITR	ILE	
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.	
ACETONITRILE UNLABELED) (75-05-8)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20.0000000000 ppm Lower Respiratory Tract irritation. Not classifiable as a human carcinogen.	
USA NIOSH	NIOSH REL (TWA) (mg/m3)	34 mg/m ³ Forms Cyanide in the body.	
USA NIOSH	NIOSH REL (TWA) (ppm)	20 ppm Forms Cyanide in the body.	
USA OSHA	OSHA PEL (TWA) (mg/m3)	70 mg/m ³ The value in mg/m3 is approximate.	
USA OSHA	OSHA PEL (TWA) (ppm)	40.0000000000 ppm The value in mg/m3 is approximate.	
8.2. Exposure controls			
Personal protective equipment	: Gloves. Protective cloth	ing. Protective goggles. Self-contained breathing apparatus.	



- Hand protection Eye protection Skin and body protection Respiratory protection
- : Wear suitable protective clothing and gloves.
- : Wear safety glasses with side shields (or goggles) and a face shield.
 - : Wear suitable protective clothing.
- : Wear approved mask.

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.

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Physical state	: Liquid
Appearance	: Liquid, clear.
Molecular mass	: 41.05 g/mol
Colour	: Colourless.
Odour	: ether-like.
Odour threshold	: No data available
рН	: No data available
Relative evaporation rate (butylacetate=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	: 2.0 °C (35.6 °F) - closed cup
Self ignition temperature	: 523 °C (973 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Vapour pressure	:73.18 hPa (54.89 mmHg) at 15°C (59 °F), 119.81 hPa (89.86 mmHg) at 25°C(77 °F)
Relative vapour density at 20 °C	: 1.42 - (Air = 1.0)
Relative density	: No data available
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
Oxidising properties	: No data available
Explosive limits	: 4.4 - 16 vol %
9.2. Other information	

No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity
No additional information available
10.2. Chemical stability
See storage and expiration date on CoA.
10.3. Possibility of hazardous reactions
No additional information available
10.4. Conditions to avoid
Open flame. Direct sunlight.
10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products
May release flammable gases.

SECTION 11: Toxicological information 11.1. Information on toxicological effects : Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Acute toxicity 4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE ATE (oral) 500.000 mg/kg bodyweight ATE (dermal) 1100.000 mg/kg bodyweight 1.500 mg/l/4h ATE (dust,mist) ACETONITRILE UNLABELED (75-05-8) LD50 oral rat 2460 mg/kg LD50 dermal rabbit 2000 mg/kg

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ACETONITRILE UNLABELED (75-05-8)	
LC50 inhalation rat (mg/l)	≥ 26.8 mg/l
LC50 inhalation rat (ppm)	7551 ppm - 8h
ATE (oral)	500.000 mg/kg bodyweight
ATE (dermal)	2000.000 mg/kg bodyweight
ATE (gases)	4500.000 ppmV/4h
ATE (vapours)	11.000 mg/l/4h
ATE (dust,mist)	1.500 mg/l/4h
4-METHYLUMBELLIFERONE UNLABELED (9	0-33-5)
LD50 oral rat	3850 mg/kg
ATE (oral)	3850.000 mg/kg bodyweight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

ACETONITRILE UNLABELED (75-05-8)	
LC50 fishes 1	1640.00 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

ACETONITRILE UNLABELED (75-05-8)		
Persistence and degradability	Biodegradability Result: - Readily biodegradable.	
4-METHYLUMBELLIFERONE UNLABELED	(90-33-5)	
Persistence and degradability	Not available.	
12.3. Bioaccumulative potential		
4-METHYLUMBELLIFERONE UNLABELED	100 UG/ML IN ACETONITRILE	
Log Pow	-0.34	
ACETONITRILE UNLABELED (75-05-8)		
Log Pow	-0.34	
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow <= 4).	
4-METHYLUMBELLIFERONE UNLABELED (90-33-5)		
Bioaccumulative potential	Not available.	
12.4. Mobility in soil		
-		
ACETONITRILE UNLABELED (75-05-8)		
Ecology - soil	Not expected to absorb on soil.	

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4-METHYLUMBELLIFERONE UNLABELED Ecology - soil	Not available.
••	
2.5. Results of PBT and vPvB assessme	ent
No additional information available	
12.6. Other adverse effects	
No additional information available	
SECTION 13: Disposal consideration	ns
I3.1. Waste treatment methods	
Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Naste disposal recommendations	: Dispose of contents/container to Comply with applicable regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
SECTION 14: Transport information	
n accordance with ADR / RID / ADNR / IMDG /	
I4.1. UN number	
JN-No.(DOT)	: 1648
DOT NA no.	UN1648
14.2. UN proper shipping name	
DOT Proper Shipping Name	: Acetonitrile
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid
Packing group (DOT) DOT Special Provisions (49 CFR 172.102)	 II - Medium Danger 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
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
OOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
4.3. Additional information	
Other information	: No supplementary information available.
Overland transport	
Packing group (ADR)	: 11
Class (ADR)	: 3 - Flammable liquids
Hazard identification number (Kemler No.)	: 33
Classification code (ADR)	: 55 : F1
Danger labels (ADR)	: 3 - Flammable liquids

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Orange plates	33 1648
Tunnel restriction code	: D/E
Limited quantities (ADR)	1L
EAC code	: •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(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)
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	
4-METHYLUMBELLIFERONE UNLABELED 10	0 UG/ML IN ACETONITRILE
Listed on SARA Section 313 (Specific toxic chem	ical listings)
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
ACETONITRILE UNLABELED (75-05-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE		
Listed on the Canadian DSL (Domestic Sustances List) inventory.		
ACETONITRILE UNLABELED (75-05-8)		
Listed on the Canadian DSL (Domestic Sustances List) inventory.		

15.2.1. National regulations

No additional information available

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15.3. US State regulations

4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE()

	V
State or local regulations	U.S Massachusetts - Right To Know List
	U.S Pennsylvania - RTK (Right to Know) List
	U.S New Jersey - Right to Know Hazardous Substance List
	This product does not contain any chemicals known to State of California to cause cancer,
	birth defects, or any other reproductive harm.

ACETONITRILE UNLABELED (75-05-8)

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - New Jersey - Right to Know Hazardous Substance List

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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::

Acture Tox. 4 (Dermai)Acture toxicity (derma), Category 4Acute Tox. 4 (Inhalation)Acute toxicity (inhal.), Category 4Acute Tox. 4 (Inhalation:dust,mist)Acute toxicity (inhalation:dust,mist) Category 4Acute Tox. 4 (Oral)Acute toxicity (inhalation:dust,mist) Category 4Eye Irrit. 2Serious eye damage/eye irritation, Category 2Flam. Liq. 2Flammable liquids, Category 2Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH319Causes serious eye irritationH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritating to eyes, respiratory system and skin	Asute Teur 4 (Dermal)	
Acute Tox. 4 (Inhalation:dust,mist)Acute toxicity (inhalation:dust,mist) Category 4Acute Tox. 4 (Oral)Acute toxicity (oral), Category 4Eye Irrit. 2Serious eye damage/eye irritation, Category 2Flam. Liq. 2Flammable liquids, Category 2Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH332Harmful inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammable	Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)Acute toxicity (oral), Category 4Eye Irrit. 2Serious eye damage/eye irritation, Category 2Flam. Liq. 2Flammable liquids, Category 2Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH324Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyes, respiratory system and skinFHighly flammable	Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Eye Irrit. 2Serious eye damage/eye irritation, Category 2Flam. Liq. 2Flammable liquids, Category 2Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH320Harmful in contact with skinH315Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	Acute Tox. 4 (Inhalation:dust,mist)	
Flam. Liq. 2Flammable liquids, Category 2Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH322Harmful if inhaledH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Skin Irrit. 2Skin corrosion/irritation, Category 2STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH319Causes serious eye irritationH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant		Serious eye damage/eye irritation, Category 2
STOT SE 3Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritationH225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant		
H225Highly flammable liquid and vapourH302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritating to Irritating to eyes	Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302Harmful if swallowedH312Harmful in contact with skinH315Causes skin irritationH319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H312Harmful in contact with skinH315Causes skin irritationH319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritating	H225	Highly flammable liquid and vapour
H315Causes skin irritationH319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritating	H302	Harmful if swallowed
H319Causes serious eye irritationH332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	H312	Harmful in contact with skin
H332Harmful if inhaledH335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	H315	Causes skin irritation
H335May cause respiratory irritationR11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	H319	Causes serious eye irritation
R11Highly flammableR20/21/22Harmful by inhalation, in contact with skin and if swallowedR36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	H332	Harmful if inhaled
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R36Irritating to eyesR36/37/38Irritating to eyes, respiratory system and skinFHighly flammableXiIrritant	R11	Highly flammable
R36/37/38 Irritating to eyes, respiratory system and skin F Highly flammable Xi Irritant	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
F Highly flammable Xi Irritant	R36	Irritating to eyes
Xi Irritant	R36/37/38	Irritating to eyes, respiratory system and skin
	F	Highly flammable
Xn Harmful	Xi	Irritant
	Xn	Harmful

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given. NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all 0 ambient conditions. NFPA reactivity 0 - Normally stable, even under fire exposure conditions, : and are not reactive with water. **HMIS III Rating** Health : 2 Moderate Hazard - Temporary or minor injury may occur Flammability : 3 Serious Hazard Physical : 0 Minimal Hazard

CIL Mixture SDS

4-METHYLUMBELLIFERONE UNLABELED 100 UG/ML IN ACETONITRILE ULM-7309-S

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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