

Apollo Scientific

Part Number: **OR29452** Version No: **3.3** Safety Data Sheet Chemwatch Hazard Alert Code: 0

Issue Date: **11/07/2023** Print Date: **11/07/2023** S.GHS.GB-NIR.EN

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

Product Identifier

Product name	lethyl 2,5-dimethyl-4-formyl-1H-pyrrole-3-carboxylate	
Chemical Name	I Name Methyl 4-formyl-2 5-dimethyl-1h-pyrrole-3-carboxylate 97%	
Synonyms	Not Available	
Other means of identification	Not Available	
CAS number	175205-91-1*	

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

Relevant identified uses	Not Available

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Apollo Scientific	Apollo Scientific Itd	
Address	Whitefield Road, Bredbury SK62QR United Kingdom	Whitefield Road, Bredbury Cheshire SK6 2QR United Kingdom (NI)	
Telephone	01614060505	+44(0) 161 406 0505	
Fax 0161 406 0506 Not Available		Not Available	
Website	http://www.apolloscientific.co.uk/	apolloscientific.co.uk	
Email	sales@apolloscientific.co.uk	sales@apolloscientific.co.uk	

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments ^[1]

Not Applicable

Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

CAS No		%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor
Legend:	d: 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L * EU IOELV. available; [e] Substance identified as having endocrine disrupting properties		L; * EU IOELVs		

Mixtures

See section above for composition of Substances

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	 Use water delivered as a fine spray to control fire and cool adjacent area. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	 Non combustible. Not considered a significant fire risk, however containers may burn.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment. Prevent spillage from entering drains, sewers or water courses. Recover product wherever possible. Put residues in labelled containers for disposal. If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	 Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities

Suitable container	 Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. None known

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
Methyl 2,5-dimethyl-4-formyl- 1H-pyrrole-3-carboxylate	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
Methyl 2,5-dimethyl-4-formyl- 1H-pyrrole-3-carboxylate	Not Available		Not Available	

Exposure controls

	Engineering controls are used to remove a hazard or place engineering controls can be highly effective in protecting w provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job act Enclosure and/or isolation of emission source which keeps that strategically "adds" and "removes" air in the work envi designed properly. The design of a ventilation system mus Employers may need to use multiple types of controls to pl General exhaust is adequate under normal operating cond Correct fit is essential to obtain adequate protection. Provid contaminants generated in the workplace possess varying	vorkers and will typically be independent of wo ivity or process is done to reduce the risk. is a selected hazard "physically" away from the ironment. Ventilation can remove or dilute an it match the particular process and chemical o revent employee overexposure. Ilitions. If risk of overexposure exists, wear SA de adequate ventilation in warehouse or close	rker interactions to worker and ventilation air contaminant if r contaminant in use. A approved respirator. d storage areas. Air
	fresh circulating air required to effectively remove the conta	•	
	Type of Contaminant:		Air Speed:
	solvent, vapours, degreasing etc., evaporating from tank (in still air)		0.25-0.5 m/s (50-100 f/min)
	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)		0.5-1 m/s (100-200 f/min.)
opropriate engineering controls	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)		rge 1-2.5 m/s (200-500 f/min)
	grinding, abrasive blasting, tumbling, high speed wheel go into zone of very high rapid air motion).	/ 2.5-10 m/s (500-2000 f/min.)	
	Within each range the appropriate value depends on:		
	Lower end of the range 1: Room air currents minimal or favourable to capture 2: Contaminants of low toxicity or of nuisance value only	Upper end of the range 1: Disturbing room air currents 2: Contaminants of high toxicity	
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents	

meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Individual protection measures, such as personal protective equipment



Eye and face protection	 Safety glasses with side shields Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
Skin protection	See Hand protection below
Hands/feet protection	 Wear general protective gloves, eg. light weight rubber gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Inportant factors in the selection of gloves include: frequency and duration of contact, chemical resistance of glove material, glove thickness and better than 240 minutes according to EN 374, US F739, AS/NZS 2161.1 or national equivalent). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: Excellent when breakthrough time < 20 min Fair when breakthrough time < 480 min. For eneral applications, gloves with a thicknes
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: • Overalls. • Barrier cream. • Eyewash unit.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available

Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	179-181	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled using animal models). Neverth Ingestion The material has NOT been clot of the lack of corroborating an Skin Contact The material is not thought to using animal models). Neverth Eye Although the liquid is not though transient discomfort character Chronic Long-term exposure to the pro-	IRRITATION		
Inhaled using animal models). Neverth Ingestion The material has NOT been closed of the lack of corroborating an Skin Contact The material is not thought to using animal models). Neverth Eve Although the liquid is not thought	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		
Inhaled using animal models). Neverth using animal models). Neverth measures be used in an occup Ingestion The material has NOT been cl of the lack of corroborating an Skin Contact The material is not thought to using animal models). Neverth	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).		
Inhaled using animal models). Neverth measures be used in an occup The material has NOT been characterial	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.		
Inhaled using animal models). Neverth	assified by EC Directives or other classification systems as "harmful by ingestion". This is becaus mal or human evidence.		
The material is not thought to	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable contro measures be used in an occupational setting.		

	TOXICITY	IRRITATION
4-formyl-1H-pyrrole- 3-carboxylate	Not Available	Not Available
Legend:	1. Value obtained from Europe ECHA Registered Substances - Unless otherwise specified data extracted from RTECS - Regist	-

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×
	Le	gend: 🗙 – Data either not ava	ailable or does not fill the criteria for classification

Data available to make classification

SECTION 12 Ecological information

Methyl 2,5-dimethyl-	Endpoint	Test Duration (hr)	Species	Value	Source
4-formyl-1H-pyrrole- 3-carboxylate	Not Available	Not Available	Not Available	Not Available	Not Availabl
Legend:	4. US EPA, E	n 1. IUCLID Toxicity Data 2. Europe ECHA R cotox database - Aquatic Toxicity Data 5. EC tion Data 7. METI (Japan) - Bioconcentration	ETOC Aquatic Hazard Assessment Data 6.	•	

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility	
	No Data available for all ingredients	

SECTION 13 Disposal considerations

Waste treatment methods	3
Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. Do NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sever may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 Transport information

Labels Required Marine Pollutant NO Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group

Transport in bulk in accordance with the IGC Code

Product name	Ship Type

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

National Inventory Status

National Inventory	Status			
Australia - AIIC / Australia Non-Industrial Use	Not Available			
Canada - DSL	Not Available			
Canada - NDSL	Not Available			
China - IECSC	Not Available			
Europe - EINEC / ELINCS / NLP	Not Available			
Japan - ENCS	Not Available			
Korea - KECI	Not Available			
New Zealand - NZIoC	Not Available			
Philippines - PICCS	Not Available			
USA - TSCA	Not Available			
Taiwan - TCSI	Not Available			
Mexico - INSQ	Not Available			
Vietnam - NCI	Not Available			
Russia - FBEPH	Not Available			
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.			

SECTION 16 Other information

Revision Date	11/07/2023
Initial Date	11/07/2023

SDS Version Summary

Version	Date of Update	Sections Updated
2.3	11/07/2023	Hazards identification - Classification, Korean MSDS Number, Identification of the substance / mixture and of the company / undertaking - Supplier Information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

Definitions and abbreviations

PC - TWA: Permissible Concentration-Time Weighted Average PC - STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit. IDLH: Immediately Dangerous to Life or Health Concentrations ES: Exposure Standard OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value **BCF: BioConcentration Factors BEI: Biological Exposure Index** AIIC: Australian Inventory of Industrial Chemicals DSL: Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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