



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 29-Aug-2023

Revision Number 1

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

1.1. Product identifier

Product Code(s) TRC-M328025-100G
Product Name 4-Methyl-2-pentanone
Form Not applicable

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

EC No (EU Index No) 203-550-1
CAS No. 108-10-1
Chemical name 4-Methylpentan-2-one
Pure substance/mixture Substance
Formula C₆H₁₂O
Molecular weight 100.16

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

Recommended use Laboratory use
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM
:+44 (0) 20 8943 7000
Fax :+44 (0) 20 8943 2767
eMail : gb@lgcstandards.com

Web : www.lgcstandards.com

For further information, please contact



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E-mail address sds-request@lgcgroup.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

Emergency Telephone - §45 - (EC)1272/2008	
Europe	112
Austria	No information available
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
France	
Hungary	
Ireland	
Italy	
Lithuania	
Luxembourg	
Netherlands	
Norway	
Portugal	
Romania	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Serious eye damage/eye irritation	Category 2 - (H319)



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Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity — single exposure	Category 3 - (H336)
Category 3 Respiratory irritation, Narcotic effects	
Flammable liquids	Category 2 - (H225)

2.2. Label elements

Contains 4-Methylpentan-2-one



Signal word

Danger

Hazard statements

H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H225 - Highly flammable liquid and vapour
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P312 - Call a POISON CENTER or doctor if you feel unwell
P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

Chemical name	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances
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4-Methylpentan-2-one	-	-
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SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
4-Methylpentan-2-one 108-10-1	100	-	203-550-1 (606-004-00-4)	Flam. Liq. 2 (H225) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) Carc. 2 (H351) STOT SE 3 (H336) Repeated exposure may cause skin dryness or cracking (EUH066)			

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

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
4-Methylpentan-2-one 108-10-1	2080	3000	No data available	11 + 8.1922	No data available

+ This value is the harmonised acute toxicity estimate (ATE) listed in CLP Annex VI, Part 3. This harmonised ATE value must be used when calculating the acute toxicity estimate (ATE_{mix}) for classifying a mixture containing the listed substance

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures



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General advice	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists.

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

Symptoms	May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/ or wheezing. Difficulty in breathing.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the	Risk of ignition. Keep product and empty container away from heat and sources of ignition.
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chemical

In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid breathing vapours or mists.

Other information

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections

See section 8 for more information. See section 13 for more information.



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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³	TWA: 50 mg/m ³ STEL: 200 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³



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	STEL: 50 ppm STEL: 208 mg/m ³	STEL 50 ppm STEL 208 mg/m ³ Sk*	STEL: 50 ppm STEL: 208 mg/m ³		STEL: 50 ppm STEL: 208 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 80 mg/m ³ Sk* Ceiling: 200 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 208 mg/m ³ STEL: 50 ppm Sk*	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 80 mg/m ³ STEL: 50 ppm STEL: 210 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ Sk*	TWA: 20 ppm TWA: 83 mg/m ³ Peak: 40 ppm Peak: 166 mg/m ³ Sk*	TWA: 100 ppm TWA: 410 mg/m ³ STEL: 100 ppm STEL: 410 mg/m ³ Sk*	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 208 mg/m ³ STEL: 50 ppm
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³ Sk*	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 82 mg/m ³ STEL: 75 ppm STEL: 307 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 25 ppm TWA: 104 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³ Sk*	TWA: 83 mg/m ³ STEL: 200 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
4-Methylpentan-2-one 108-10-1	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ Sk* Ceiling: 166 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³ Sk*	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³
Chemical name	Sweden		Switzerland		United Kingdom
4-Methylpentan-2-one 108-10-1	NGV: 20 ppm NGV: 83 mg/m ³ Bindande KGV: 50 ppm Bindande KGV: 200 mg/m ³		TWA: 20 ppm TWA: 82 mg/m ³ STEL: 40 ppm STEL: 164 mg/m ³ Sk*		TWA: 50 ppm TWA: 208 mg/m ³ STEL: 100 ppm STEL: 416 mg/m ³ Sk*

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
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4-Methylpentan-2-one 108-10-1	-	-	-	3.5 mg/L - urine (4-Methyl-pentan-2-on) - not critical	-
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
4-Methylpentan-2-one 108-10-1	-	-	- urine (Methylisobutylketone) - end of shift	0.7 mg/L (urine - 4-Methylpentan-2-one end of shift) 0.7 mg/L - BAT (end of exposure or end of shift) urine	0.7 mg/L (urine - 4-Methylpentan-2-one end of shift)
Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII	
4-Methylpentan-2-one 108-10-1	-	1 mg/L (urine - Methyl isobutyl ketone end of shift)	-	1 mg/L - urine (MIBK) - end of shift	
Chemical name	Latvia	Luxembourg	Romania	Slovakia	
4-Methylpentan-2-one 108-10-1	-	-	-	3.5 mg/L (urine - 4-Methyl-2-pentanone end of exposure or work shift)	
Chemical name	Slovenia	Spain	Switzerland	United Kingdom	
4-Methylpentan-2-one 108-10-1	0.7 mg/L - urine (4-Methylpentan-2-one) - at the end of the work shift	1 mg/L (urine - Methyl isobutyl ketone end of shift)	0.7 mg/L (urine - 4-Methylpentane-2-one end of shift)	20 µmol/L - urine (4-Methylpentan-2-one) - post shift	

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. Impervious gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyethylene (PE)		8 hours

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.



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	Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.
Environmental exposure controls	Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Oily
Colour	colourless
Odour	sweet.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	-84 °C	None known
Initial boiling point and boiling range	116 - 118 °C	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	8 vol.%330 g/m ³	
Lower flammability or explosive limits	1.2 vol.%50 g/m ³	
Flash point	15 °C	None known
Autoignition temperature	448 °C	None known
Decomposition temperature	114 - 117 °C	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	0.585 mPa · s	None known
Water solubility	Slightly soluble 14.1 g/L	None known
Solubility(ies)	No data available	None known
Partition coefficient	1.19	None known
Vapour pressure	2.64 kPa	None known
Relative density	0.7978 g/cm ³	None known
Bulk density	No data available	



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Liquid Density	No data available	
Relative vapour density	3.45	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

Molecular weight	100.16
Molecular formula	C ₆ H ₁₂ O

9.2.1. Information with regards to physical hazard classes
Not applicable 114 - 117 °C 114 - 117 °C

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Excessive heat.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information



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11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/or wheezing.
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Numerical measures of toxicity

Acute toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
4-Methylpentan-2-one	= 2080 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	2000 - 4000 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.



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Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
4-Methylpentan-2-one	Carc. 2

Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness. May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity



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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
4-Methylpentan-2-one	EC50: =400mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 496 - 514mg/L (96h, Pimephales promelas)	-	EC50: =170mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
4-Methylpentan-2-one	1.9

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product contains substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
4-Methylpentan-2-one	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.



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Contaminated packaging

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1245
14.2 UN proper shipping name	Methyl isobutyl ketone
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1245, Methyl isobutyl ketone, 3, II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
ERG Code	3L

IMDG

14.1 UN number or ID number	UN1245
14.2 UN proper shipping name	Methyl isobutyl ketone
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1245, Methyl isobutyl ketone, 3, II, (15°C c.c.)
14.5 Marine pollutant	NP
Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
EmS-No.	F-E, S-D No information available
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1245
14.2 UN proper shipping name	Methyl isobutyl ketone
14.3 Transport hazard class(es)	3
14.4 Packing group	II
Description	UN1245, Methyl isobutyl ketone, 3, II
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
Classification code	F1

ADR

14.1 UN number or ID number	UN1245
14.2 UN proper shipping name	Methyl isobutyl ketone
14.3 Transport hazard class(es)	3



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14.4 Packing group	II
Description	UN1245, Methyl isobutyl ketone, 3, II, (D/E)
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
Classification code	F1
Tunnel restriction code	(D/E)

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
4-Methylpentan-2-one 108-10-1	RG 84	-

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

Poland

SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on



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waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
4-Methylpentan-2-one - 108-10-1	75	

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA

LGC, to the best of its ability, has confirmed that the chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021."

DSL/NDL

EINECS/ELINCS

Contact supplier for inventory compliance status

Contact supplier for inventory compliance status



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ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method



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Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method
Flammable liquids	On basis of test data

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of



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End of Safety Data Sheet