

1 Identification

- **Product identifier**

- *Product number* LZC8643
- *Trade name:* **PU THINNER**
- *Application of the substance / the mixture* For professional use

- **Details of the supplier of the safety data sheet**

- *Manufacturer/Supplier:*
IVM Chemicals srl
Viale della Stazione 3 - 27020 Parona (PV) Italy tel +39 038425441
- *Information department:*
Environmental Health and safety office
hseoffice@ivmchemicals.com
- *Emergency telephone number:*
ChemTel Expert Assistance Hotline/SDS Fax Access by dialing 1-800-255-3924 or for International +1-813-248-0585.

2 Hazard(s) identification

- **Classification of the substance or mixture**

- Flam. Liq. 2 H225 *Highly flammable liquid and vapor.*
 Eye Irrit. 2A H319 *Causes serious eye irritation.*
 Carc. 2 H351 *Suspected of causing cancer.*
 Repr. 1B H360 *May damage fertility or the unborn child.*
 STOT SE 3 H335-H336 *May cause respiratory irritation. May cause drowsiness or dizziness.*

- **Label elements**

- *GHS label elements*
The product is classified and labeled according to the Globally Harmonized System (GHS).
- *Hazard pictograms*



GHS02 GHS07 GHS08

- *Signal word* Danger

- *Hazard-determining components of labeling:*

- 4-methylpentan-2-one
- 2-methoxypropyl acetate
- 2-methoxy-1-methylethyl acetate
- isobutyl acetate

- *Hazard statements*

- H225 *Highly flammable liquid and vapor.*
- H319 *Causes serious eye irritation.*
- H351 *Suspected of causing cancer.*
- H360 *May damage fertility or the unborn child.*
- H335-H336 *May cause respiratory irritation. May cause drowsiness or dizziness.*

- *Precautionary statements*

- P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
- P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*

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P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

Classification system:

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:**

Mixture: consisting of the following components.
Solvent mixture

· **Dangerous components:**

108-10-1	4-methylpentan-2-one 	50-74.99%
108-65-6	2-methoxy-1-methylethyl acetate 	30-39.99%
110-19-0	isobutyl acetate 	10-12.49%
70657-70-4	2-methoxypropyl acetate 	≥0.1-<0.5%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

personal protective equipment for first aid responders is recommended. (please see section 8)

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

For symptoms and effects caused by substances, refer to Section 11.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Alcohol resistant foam

Alcohol resistant foam, CO, powder, water spray/mist.

· **For safety reasons unsuitable extinguishing agents:**

Do not use a jet water stream as it may scatter and spread fire.

· **Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

· **Advice for firefighters**

Cool by spraying with water the containers to prevent product decomposition and the development of substances potentially hazardous for health and also, in the case of closed containers exposed to flames to prevent explosions.

· **Protective equipment:**

Hardhat with visor, fireproof clothing, suitable gloves and if necessary respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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· Protective Action Criteria for Chemicals

· PAC-1:		
108-10-1	4-methylpentan-2-one	75 ppm
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
110-19-0	isobutyl acetate	450 ppm
70657-70-4	2-methoxypropyl acetate	50 ppm
· PAC-2:		
108-10-1	4-methylpentan-2-one	500 ppm
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
110-19-0	isobutyl acetate	1300* ppm
70657-70-4	2-methoxypropyl acetate	1,000 ppm
· PAC-3:		
108-10-1	4-methylpentan-2-one	3000* ppm
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
110-19-0	isobutyl acetate	7500** ppm
70657-70-4	2-methoxypropyl acetate	5,000 ppm

7 Handling and storage

· Handling:
· Precautions for safe handling

- Ensure good ventilation/exhaustion at the workplace.
- Open and handle receptacle with care.
- Prevent formation of aerosols.
- Protect against electrostatic charges.
- Keep respiratory protective device available.
- Use explosion-proof apparatus / fittings and spark-proof tools.

· Information about protection against explosions and fires:

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles:

- Store in a cool, well-ventilated area, away from heat and sources of ignition
- Provide solvent resistant, sealed floor.
- Observe the label precautions, the expiration date for the use, if not indicated, is from delivery date of goods.
- In cases where there is no reported expiration date, it means that the product must be used within 8 months.

· Information about storage in one common storage facility: Not required.
· Further information about storage conditions:

- Keep receptacle tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.

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· **Specific end use(s)** Those typical of the product and the instructions in the data sheet if required.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

108-10-1 4-methylpentan-2-one

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 75 ppm Long-term value: 20 ppm BEI, A3

108-65-6 2-methoxy-1-methylethyl acetate

WEEL	Long-term value: 50 ppm
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110-19-0 isobutyl acetate

PEL	Long-term value: 700 mg/m ³ , 150 ppm
REL	Long-term value: 700 mg/m ³ , 150 ppm
TLV	Short-term value: 150 ppm Long-term value: 50 ppm

· **Ingredients with biological limit values:**

108-10-1 4-methylpentan-2-one

BEI	1 mg/L Medium: urine Time: end of shift Parameter: MIBK
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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

· **Breathing equipment:**

Short term filter device:



Suitable respiratory protective device recommended.

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Filter A

· Protection of hands:



Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The glove material has to be impermeable and resistant to the product .

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:

Fluid

· Color:

According to product specification

· Odor:

Characteristic

· Odor threshold:

Not determined.

· pH-value:

Mixture is non-polar/aprotic.

· Change in condition

· Melting point/Melting range:

Undetermined.

· Boiling point/Boiling range:

117 °C (242.6 °F)

· Flash point:

14 °C (57.2 °F)

· Flammability (solid, gaseous):

Not applicable.

· Ignition temperature:

315 °C (599 °F)

· Decomposition temperature:

Not determined.

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

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· Explosion limits:	
· Lower:	1.2 Vol %
· Upper:	10.8 Vol %
· Vapor pressure at 20 °C (68 °F): 20.2 hPa (15.2 mm Hg)	
· Density (+/- 0,03) at 20 °C (68 °F): 0.858 g/cm ³ (7.16 lbs/gal)	
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic at 20 °C (68 °F):	29 s (ISO 3 mm)
· Oxidising properties:	N.A.
· Solvent content:	
· VOC content:	100.00 % 858.0 g/l / 7.16 lb/gal
· Solids content: 0.0 %	
· Other information (HAPS)	
108-10-1	4-methylpentan-2-one
	50-74.99%
· Other information No further relevant information available.	

10 Stability and reactivity

- **Reactivity** typical of the product as indicated in the data sheet
- **Chemical stability** The product is stable in normal conditions of storage and use recommended
 - **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Vapours may form explosive mixtures with air
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Acids, alkalis and oxidizing agents
- **Hazardous decomposition products:**
in case of possible formation of combustion:
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Inhalative	LC50/4 h	30.2 mg/l (mouse)
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Safety Data Sheet

acc. to OSHA HCS

Printing date 02/09/2022

Version number 147

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108-10-1 4-methylpentan-2-one

Oral	LD50	2,080 mg/kg (mouse)
Dermal	LD50	16,000 mg/kg (rab)
Inhalative	LC50/4 h	16.6 mg/l (mouse)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,532 mg/kg (mouse)
Dermal	LD50	5,001 mg/kg (rabbit)
Inhalative	LC50/4 h	35.7 mg/l (mouse)

110-19-0 isobutyl acetate

Oral	LD50	13,400 mg/kg (mouse)
Dermal	LD50	17,401 mg/kg (rabbit)
Inhalative	LC50/4 h	31 mg/l (mouse)

70657-70-4 2-methoxypropyl acetate

Oral	LD50	5,001 mg/kg (mouse)
Dermal	LD50	5,001 mg/kg (rabbit)

· **Primary irritant effect:**· *on the skin:* No irritant effect.· *on the eye:*

Irritating effect.

Causes serious eye irritation.

· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

Irritant

Causes serious eye irritation.

Suspected of causing cancer.

May damage fertility or the unborn child.

May cause respiratory irritation.

May cause drowsiness or dizziness.

Harmful if inhaled.

May cause respiratory irritation.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer - Cl. 1 and 2)**

108-10-1 4-methylpentan-2-one

2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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12 Ecological information

· Toxicity

· Aquatic toxicity:

108-10-1 4-methylpentan-2-one

EC50	201 mg/l (daphnia) (48 h)
LC50 (96h)	180 mg/l (Fish)

108-65-6 2-methoxy-1-methylethyl acetate

EC50	1,001 mg/l (algae) (72 h) 501 mg/l (daphnia) (48 h)
LC50 (96h)	134 mg/l (Fish)

110-19-0 isobutyl acetate

EC50	370 mg/l (algae) (72 h) 25 mg/l (daphnia)
LC50 (96h)	17 mg/l (Fish)

· Persistence and degradability No further relevant information available.

· Substances Easily biodegradable

108-10-1	4-methylpentan-2-one	.
108-65-6	2-methoxy-1-methylethyl acetate	.
110-19-0	isobutyl acetate	.

· Behavior in environmental systems:

· *Bioaccumulative potential* No further relevant information available.

· *Mobility in soil* No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to hazardous waste disposers.

Dispose of contents and container in accordance with local state and federal regulations.

· Uncleaned packagings:

· *Recommendation:* Disposal must be made according to official regulations.

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14 Transport information

· **UN-Number**
· **DOT, IMDG, IATA** UN1263
· **Note** Check viscosity and flash point at section 9

· **UN proper shipping name**
· **DOT** Paint related material
· **IMDG, IATA** PAINT RELATED MATERIAL

· **Transport hazard class(es)**
· **DOT**

· **Class** 3 Flammable liquids
· **Label** 3
· **Class** 3 Flammable liquids
· **Label** 3

· **IMDG, IATA**

· **Class** 3 Flammable liquids
· **Label** 3

· **Packing group**
· **DOT, IMDG, IATA** II

· **Environmental hazards:**
· **Marine pollutant:** No

· **Special precautions for user** Warning: Flammable liquids
· **Hazard identification number (Kemler code):** 33
· **EMS Number:** F-E, S-E
· **Stowage Category** B

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

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· **UN "Model Regulation":** UN 1263 PAINT RELATED MATERIAL, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
Requirements of Federal Register

· **Various regulations**

· **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings) :**

108-10-1	4-methylpentan-2-one	50-74.99%
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· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

108-10-1	4-methylpentan-2-one
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· **Proposition 65**

· **Chemicals known to cause cancer:**

108-10-1	4-methylpentan-2-one	*	50-74.99%
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· **Chemicals known to cause reproductive toxicity for females:**

70657-70-4	2-methoxypropyl acetate	≥0.1-<0.5%
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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

108-10-1	4-methylpentan-2-one	50-74.99%
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

108-10-1	4-methylpentan-2-one	I	50-74.99%
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· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** IVM Chemicals Srl

· **Contact:** See emergency phone

· **Date of preparation / last revision** 02/09/2022 / 146

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Carc. 2: Carcinogenicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
and following amendments

Agency ECHA web site

INRS Fiche Toxicologique

IARC International agency for research on cancer

· * **Data compared to the previous version altered.**