

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 6 (replaces version 5)

Revision: 15.11.2023

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

· **1.1 Product identifier**

· **Product name: Reference Standard Gardner Colour 5**

· **Catalog number:** 134210

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

· **Application of the substance / the preparation:** Coloured Standard Solution for calibration purposes

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
www.lovibond.com

phone: +49 231 94510-0
e-mail: sales@tintometer.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
Made in UK

phone : +44 1980 664800
e-mail: SDS@tintometer.com

· **Informing department:**

e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

White mineral oil (petroleum)

· **Hazard statements**

H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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- P331 Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/container to an approved waste disposal plant.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of organic compounds.

· **Dangerous components:**

CAS: 8042-47-5 EINECS: 232-455-8	White mineral oil (petroleum) ⚠ Asp. Tox. 1, H304	80-100%
CAS: 1330-20-7 EINECS: 215-535-7 Index No: 601-022-00-9	xylene, mixed isomers, pure ⚠ Flam. Liq. 3, H226; ⚠ Aquatic Acute 1, H400 (M=1); ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	0.1-1%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information**

Personal protection for the First Aider!
 Instantly remove any clothing soiled by the product.

· **After inhalation**

Supply fresh air or oxygen.
 Call a doctor immediately.

· **After skin contact**

Instantly wash with water and soap and rinse thoroughly.
 If skin irritation or rash occurs: Get medical advice/attention.

· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.

· **After swallowing**

Rinse out mouth and then drink 1-2 glasses of water.
 Do not induce vomiting; instantly call for medical help.

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

after swallowing and inhalation:

breathing difficulty
 coughing
 dizziness
 gastric or intestinal trouble

· **Danger**

Danger of pneumonia.
 Danger of pulmonary oedema.

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

If swallowed or in case of vomiting, danger of entering the lungs

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents**

Use fire fighting measures that suit the environment.
 CO₂, extinguishing powder or water spray jet. Fight larger fire with alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents**

Water with a full water jet.
 Large Fire: Use of water spray when fighting fire may be inefficient.

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- **5.2 Special hazards arising from the substance or mixture**
combustible
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Carbon monoxide (CO) and carbon dioxide (CO₂)
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.
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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
 - **Advice for emergency responders:** Protective equipment: see section 8
 - **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
 - **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
 - **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.
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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - **Advice on safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Keep ignition sources away - Do not smoke.
 - **Hygiene measures:**
Do not inhale gases / fumes / aerosols.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.
 - **7.2 Conditions for safe storage, including any incompatibilities**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** see chapter 10
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
 - **Recommended storage temperature:** 20°C +/- 5°C
 - **7.3 Specific end use(s)** No further relevant information available.
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SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

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

CAS: 1330-20-7 xylene, mixed isomers, pure

WEL (Great Britain)	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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IOELV (European Union)	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin
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Regulatory information

WEL (Great Britain): EH40/2020

IOELV (European Union): (EU) 2019/1831

Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

Ingredients with biological limit values:
CAS: 1330-20-7 xylene, mixed isomers, pure

BMGV (Great Britain)	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
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Regulatory information BMGV (Great Britain): EH40/2011

Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls
Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

Eye/face protection

Safety glasses

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

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

Other skin protection (body protection): Protective work clothing.

Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.

Recommended filter device for short term use: Filter A

Environmental exposure controls Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Fluid
Form:	Liquid
Colour:	Yellow
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/Freezing point:	-12°C
Boiling point or initial boiling point and boiling range	218–800°C (CAS: 8042-47-5 White mineral oil (petroleum))
Flammability	combustible
Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	>112°C (CAS: 8042-47-5 White mineral oil (petroleum))
Auto-ignition temperature:	>300°C (CAS: 8042-47-5 White mineral oil (petroleum))

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· Decomposition temperature:	Not determined.
· pH	Mixture is non-soluble (in water).
· Kinematic viscosity at 40°C	<20.5 mm ² /s
· Solubility	
· Water:	Not miscible or difficult to mix
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20°C:	>0.68–<1.06 g/cm ³ (calculated)
· Relative density:	Not determined.
· Relative gas density	Not determined.
· Particle characteristics	Not applicable (liquid).
· 9.2 Other information	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	0 %
· Solvent content:	
· Organic solvents:	<1 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Fumes can combine with air to form an explosive mixture.
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
Reacts with oxidizing agents
Explosion hazard with: Nitrates, chlorates, perchlorates
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:		
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CAS: 8042-47-5 White mineral oil (petroleum)		
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Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50.	>2000 mg/kg (rabbit)
Inhalative	LC50.	>5 mg/l4h (rat)

CAS: 1330-20-7 xylene, mixed isomers, pure		
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Oral	LD50	3500 mg/kg (rat)
Dermal	LD50	>1700 mg/kg (rabbit) (GESTIS)
Inhalative	LC50/4h	29.08 mg/l (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· Information on components:		
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CAS: 8042-47-5 White mineral oil (petroleum)		
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Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

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Information on components:	
CAS: 8042-47-5 White mineral oil (petroleum)	
Sensitisation	OECD 406 (guinea pig: negative) (Magnusson / Klingman)
<ul style="list-style-type: none"> · Germ cell mutagenicity Based on available data, the classification criteria are not met. · Carcinogenicity Based on available data, the classification criteria are not met. · Reproductive toxicity Based on available data, the classification criteria are not met. 	
Information on components:	
OECD 414: Teratogenicity testing	
OECD 473: Mutagenicity testing	
OECD 471, 474, 476, 487: Germ cell mutagenicity testing	
CAS: 8042-47-5 White mineral oil (petroleum)	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)
OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test)
<ul style="list-style-type: none"> · STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met. · STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met. · Aspiration hazard May be fatal if swallowed and enters airways. 	
11.2 Information on other hazards	
· Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.	
Other information	
Other dangerous properties can not be excluded.	
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.	

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	
CAS: 8042-47-5 White mineral oil (petroleum)	
EC50	>100 mg/l/48h (Daphnia magna) (OECD 202)
IC50	≥100 mg/l/72h (Pseudokirchneriella subcapitata) (OECD 201)
LC50	>1000 mg/l/96h (gold orfe) (OECD 203)
CAS: 1330-20-7 xylene, mixed isomers, pure	
EC50	0.6 mg/l/48h (Gammarus lacustris)
EC50	11 mg/l/72h (Pseudokirchneriella subcapitata)
LC50	13.1–16.5 mg/l/96h (bluegill)
12.2 Persistence and degradability	
CAS: 8042-47-5 White mineral oil (petroleum)	
OECD 301 F	31.3 % / 28 d (.)
12.3 Bioaccumulative potential	
Pow = n-octanol/wasser partition coefficient	
log Pow > 3 = May be accumulated in organism	
CAS: 8042-47-5 White mineral oil (petroleum)	
log Pow	>6 (.)
CAS: 1330-20-7 xylene, mixed isomers, pure	
log Pow	3.16 (.)
<ul style="list-style-type: none"> · 12.4 Mobility in soil No further relevant information available. · 12.5 Results of PBT and vPvB assessment This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006. · 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties. · 12.7 Other adverse effects Avoid transfer into the environment. 	
Water hazard:	
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.	

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Must not reach sewage water or drainage ditch undiluted or unneutralised.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste.

European waste catalogue

16 05 08* discarded organic chemicals consisting of or containing hazardous substances

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

ADR, IMDG, IATA Void

14.2 UN proper shipping name

ADR, IMDG, IATA Void

14.3 Transport hazard class(es)
ADR, IMDG, IATA

Class Void

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

Not dangerous according to the above specifications.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Poisons Act UK
Regulated explosives precursors

None of the ingredients is listed.

Regulated poisons

None of the ingredients is listed.

Reportable explosives precursors

None of the ingredients is listed.

Reportable poisons

None of the ingredients is listed.

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated

Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

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· Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.
· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.
· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:
None of the ingredients is listed.
· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)
None of the ingredients is listed.
· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
None of the ingredients is listed.

- **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
- **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
- **Directive 2012/18/EU (SEVESO III):**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Information about limitation of use:** Not required.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Training hints** Provide adequate information, instruction and training for operators.
- **Relevant phrases**
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
- **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

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· Sources

Data arise from safety data sheets, reference works and literature.
GESTIS- Stoffdatenbank (Substance Database, Germany)
ECHA: European Chemicals Agency <http://echa.europa.eu>

· * Data compared to the previous version altered.

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