

Safety Data Sheet

#11327043 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Methyl green (C.I.42590)	7114-03-6	C27H35BrClN3 · ZnCl2	10	07 Sep 2026

SECTION 1

Identification

1.1 Product identifier

Product name	Methyl green (C.I.42590)
CAS number	7114-03-6
EC / EINECS number	230-415-4
Chemical formula	C27H35BrClN3 · ZnCl2
Molecular weight	653.24
SMILES	[Cl-].[Br-].Cl[Zn]Cl.C=1C=C(C=CC1C(=C2C=CC(C=C2)=[N+](C)C)C3=CC=C(C=C3)[N+](C)(C)CC)N(C)C

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

For research and development. Laboratory chemicals. Manufacture of substances.
Not suitable for human or veterinary purposes

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Skin Corr. 1; H314
STOT SE 3; H335
Aquatic Chronic 2; H411

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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H314	Causes severe skin burns and eye damage
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H335	May cause respiratory irritation
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H411	Toxic to aquatic life with long lasting effects
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CODE	PRECAUTIONARY STATEMENT
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P260	Do not breathe dust/fume/gas/mist/vapours/spray
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P271	Use only outdoors or in a well-ventilated area
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P273	Avoid release to the environment
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P280	Wear protective gloves/protective clothing/eye protection/face protection
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P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing
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2.3 Other hazards

Does not meet PBT or vPvB criteria under REACH Annex XIII. This product does not contain any known or suspected Endocrine disruptors.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	Methyl green (C.I.42590)
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CAS number	7114-03-6
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EC number	230-415-4
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Concentration / purity	~100.0%
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Classification according to Regulation (EC) No 1272/2008	Skin Corr. 1; H314 STOT SE 3; H335 Aquatic Chronic 2; H411
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Hazard statements	H314, H335, H411
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Acute toxicity estimate (ATE)	No data available
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Impurities / stabilising additives	Not applicable
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SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. Continue to rinse for at least 15 minutes. Get medical advice/attention if you feel unwell.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Foam, carbon dioxide, dry powder or water fog
Unsuitable extinguishing media	No specific firefighting procedure given

5.2 Special hazards arising from the substance or mixture

Combustible
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Hydrogen chloride gas
Hydrogen bromide gas
Zinc
Zinc oxides
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection, see section 8.

6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers. Remove sources of ignition. Beware of the explosion danger. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

For precautions see section 2.2. Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.

Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature Ambient

Conditions for safe storage (incompatibilities) Store in a dry place. Store in a closed container. Storage class: 8

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL) Not applicable

DNEC/PNEC data Not applicable

8.2 Exposure controls

Eye / face protection	Chemical splash goggles Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Gloves: Nitrile Rubber, 0.11mm (480 mins).
Respiratory protection	Self-contained breathing apparatus Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	No data available
Environmental exposure controls	No data available

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Solid DERIVED FROM: LITERATURE
Colour	Brown DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	233 °C DERIVED FROM: LITERATURE
Boiling point	No data available
Flammability	No data available
Lower and upper explosion limit	No data available
Flash point	Not applicable
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	4.6 DERIVED FROM: LITERATURE
Acidity	Acid DERIVED FROM: LITERATURE
Kinematic viscosity	No data available
Solubility	70g/l DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure	No data available

Density (g/mL)	Not applicable
Relative vapour density	No data available
Particle characteristics	No data available

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

None known

10.5 Incompatible materials

Strong oxidising agents

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 (LD50 / LC50)	Symptoms of swallowing/ingestion: burns in mouth, throat, oesophagus and gastrointestinal tract., Nausea, Vomiting, Diarrhoea
	Other symptoms: mucosal irritations, Cough, Shortness of breath, bronchitis, Possible damages:, damage of respiratory tract, Necrosis, Inhalation may lead to the formation of oedemas in the respiratory tract.
Skin corrosion / irritation	Causes severe skin burns and eye damage
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	No data available
Carcinogenicity	No data available
Mutagenicity	No data available

Reproductive toxicity*No data available***STOT (single / repeated exposure)**

May cause respiratory irritation.

Aspiration hazard*No data available***11.2 Information on other hazards**

The substance/mixture does not contain components considered to have endocrine disrupting properties

SECTION 12**Ecological information****12.1 Toxicity***No data available***12.2 Persistence and degradability**

Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary.

Persistence based on information available, may persist. Degradation in sewage treatment plant.

Contains substances known to be hazardous to the environment or not degradable in wastewater treatment plants.

12.3 Bioaccumulative potential

May have some potential to bioaccumulate

12.4 Mobility in soil

The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5 Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH Annex XIII. This substance/mixture does not meet the vPvB criteria of REACH Annex XIII

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects*No data available***SECTION 13****Disposal considerations****13.1 Waste treatment methods**

Dispose of in accordance with local/national regulations

SECTION 14

Transport information

14.1 UN number or ID number

UN3261

14.2 UN proper shipping name

CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.

14.3 Transport hazard class(es)

8



14.4 Packing group

II

14.5 Environmental hazards

Yes.

14.6 Special precautions for user

Special precautions for user For specific precautions see Section 8 and Section 13

Transport category 2

Tunnel code (E)

Packing instruction (ADR) P002

Packing instruction (IMDG) P002

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

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

Substance-specific regulations (e.g. licences) *No data available*

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

No

SECTION 16

Other information

Revision notes / other information

This MSDS replaces version 1 (16.03.2022)

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.