SAFETY DATA SHEET

according to Regulation (EC) No 1272/2008 (CLP)

1-Methylcyclopropene 3.3% CG

Shanghai Bosman Industrial Co., Limited

Product name	**1-Methylcyclopropene 3.3% CG**	SDS number	**BM-SDS-9235**
Version	**1.0**	Revision date	**04 November 2026**
Supersedes	**Not applicable - new document**	Print date	**04 November 2026**
Language	**EN**	Format	**GHS / CLP - 16 sections**

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	1-Methylcyclopropene 3.3% CG
Product type	Microcapsule granule (CG) - plant growth regulator for post-harvest treatment
Active substance	1-Methylcyclopropene (CAS 3100-04-7)

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

Identified use	Plant growth regulator for post-harvest treatment of fresh produce. The water-soluble sachets are added to water inside a sealed store or tent; 1-methylcyclopropene is released as a gas and delays ripening and senescence of fruits, vegetables and cut flowers. For professional users only. Observe the label instructions for dose, crop, temperature, treatment time and ventilation.
Uses advised against	Any use other than the identified use. Not for domestic or residential use. Do not use on crops or sites not stated on the label.

1.3 Details of the supplier of the safety data sheet

Supplier	Shanghai Bosman Industrial Co., Limited
Address	No. 1611, North Sichuan Road, Hongkou District, Shanghai 200080, P.R. China
Telephone	+86 21 6306 5878
Fax	+86 21 6091 1557
E-mail	info@bosmangroup.com
Website	www.bosmangroup.com

1.4 Emergency telephone number

24-hour emergency line	+86 21 6356 6528 (Shanghai Bosman Industrial Co., Limited, 24 h)
Poison centre	Contact your local poisons information centre or emergency services (e.g. 120 in mainland China) in case of poisoning.

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP), Annex I.

This product is not classified as hazardous according to Regulation (EC) No 1272/2008 (CLP). No hazard class or category applies.

2.2 Label elements

SIGNAL WORD

None (not classified as hazardous)

No hazard statements are assigned to this product.

Precautionary statements - Prevention

P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary statements - Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice or attention.

Precautionary statements - Storage

P402+P404	Store in a dry place. Store in a closed container.
P410+P403	Protect from sunlight. Store in a well-ventilated place.

Precautionary statements - Disposal

P501	Dispose of contents and container to a licensed hazardous-waste contractor.

2.3 Other hazards

The product as supplied is a solid capsule granule and is not classified as hazardous under CLP. The active substance, 1-methylcyclopropene, is released as a gas when the granules contact water; the released gas is extremely flammable (H220) and may form flammable or explosive mixtures with air, particularly in confined spaces. Use only in adequately ventilated areas and keep away from ignition sources, hot surfaces and open flames during treatment. Damaged sachets may release dust; avoid breathing the dust.

This mixture does not contain any substance that is identified as having endocrine-disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100, at a concentration of 0.1 % (w/w) or higher.

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable - this product is a mixture.

3.2 Mixtures

Component	CAS No.	EC No.	Concentration	Classification (CLP)
1-Methylcyclopropene	3100-04-7	-	3.3%	Flam. Gas 1 (H220)
Cyclodextrin carrier and formulants	-	-	Balance	Not classified

The active substance is encapsulated in a water-soluble cyclodextrin carrier; the granules release 1-methylcyclopropene as a gas on contact with water.

The classification shown against the active substance is the classification of the substance itself. The formulated product as supplied is not classified as hazardous (see Section 2).

4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move the person out of the contaminated area. Show this safety data sheet to the doctor in attendance. Never give anything by mouth to an unconscious person.
After inhalation	Move the person into fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
After skin contact	Take off all contaminated clothing immediately. Wash the skin thoroughly with soap and plenty of water. If skin irritation or a rash develops, seek medical advice.
After eye contact	Rinse cautiously with water for at least 15 minutes, holding the eyelids open. Remove contact lenses if present and easy to do. Continue rinsing. Get medical advice if irritation develops.
After ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation of high concentrations of the released gas may cause headache, drowsiness, dizziness or nausea. Dust from damaged sachets may cause mechanical irritation of the eyes, skin and respiratory tract. Ingestion of the granules may cause gastrointestinal discomfort.

4.3 Indication of any immediate medical attention and special treatment needed

No specific antidote. Treat symptomatically and supportively. Move the person to fresh air if the released gas has been inhaled in a confined space. In all cases of doubt, or if symptoms persist, seek medical advice and show this safety data sheet to the attending physician.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable media	Water spray, foam, dry powder or carbon dioxide. Use the extinguishing medium appropriate to the surrounding fire.
Unsuitable media	Do not use a solid water stream - it may scatter and spread the fire.

5.2 Special hazards arising from the substance or mixture

The product as supplied is a solid granule and is not flammable. The active substance released on contact with water is an extremely flammable gas; in a fire, packages may rupture and the released gas can form flammable mixtures with air. Thermal decomposition may release carbon oxides.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing. Contain fire water run-off; do not allow it to enter drains or watercourses. Cool closed containers with water spray. Collect contaminated fire-fighting water separately.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear the personal protective equipment specified in Section 8. Avoid breathing vapour, mist or spray. Avoid contact with skin and eyes. Ensure adequate ventilation. Remove all sources of ignition where the product is flammable.

6.2 Environmental precautions

Do not allow the product to enter drains, sewers, watercourses or groundwater. Prevent the material from spreading. Notify the relevant authorities if the product has entered a watercourse or sewer, or has contaminated soil or vegetation.

6.3 Methods and material for containment and cleaning up

Sweep up the granules without raising dust and place them in a clean, dry, labelled container for disposal. Do not add water to spilled material, especially in a confined space: contact with water releases the flammable active substance. Ventilate the area and remove all sources of ignition. Prevent the material from entering drains, sewers or watercourses.

6.4 Reference to other sections

See Section 8 for personal protection and Section 13 for disposal.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

- Use only in well-ventilated areas and keep away from ignition sources, hot surfaces and open flames: the gas released on contact with water is extremely flammable.
- Keep the sachets dry and sealed until use; open or pierce them only as directed on the label and only at the point of application.
- Avoid generating and breathing dust from damaged sachets.
- Wear the personal protective equipment specified in Section 8 and wash hands and face thoroughly after handling.
- Do not eat, drink or smoke while handling the product.
- Ventilate treated stores or tents before re-entry, in accordance with the label instructions.

7.2 Conditions for safe storage, including any incompatibilities

- Store in the original sealed water-soluble sachets inside the outer foil pouch, in a cool, dry, well-ventilated place.
- Protect from moisture, water and high humidity: contact with water causes premature release of the active substance.
- Protect from direct sunlight, heat and all sources of ignition.
- Keep locked up and out of the reach of children and unauthorised persons; store separately from food, feed, seed and drinking water.
- Observe the product label and any national storage restrictions for plant protection products.

7.3 Specific end use(s)

Plant growth regulator for post-harvest treatment of fresh produce. The water-soluble sachets are added to water inside a sealed store or tent; 1-methylcyclopropene is released as a gas and delays ripening and senescence of fruits, vegetables and cut flowers. For professional users only. Observe the label instructions for dose, crop, temperature, treatment time and ventilation.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Component	Limit value	Type	Basis
1-Methylcyclopropene (CAS 3100-04-7)	No OEL established	—	No binding occupational exposure limit is listed; apply good occupational hygiene practice.

No occupational exposure limit has been established for 1-methylcyclopropene or for the formulated product. Apply the general hygiene standards of good occupational practice and the precautionary measures described in this section.

8.2 Exposure controls

Use only in well-ventilated areas. Where sachets are handled or opened in enclosed spaces, provide local exhaust ventilation or ensure adequate general ventilation. Avoid generating dust from damaged sachets. During gas treatment, keep the treated space closed as directed on the label and ventilate it thoroughly before re-entry.

Protective equipment	Requirement
Eye protection	Safety glasses with side shields or tight-fitting goggles (EN 166).
Skin protection - hands	Chemical-resistant gloves (e.g. nitrile rubber, EN 374) when handling granules or damaged sachets.
Skin protection - body	Long-sleeved work clothing and closed footwear.
Respiratory protection	Where dust is generated or ventilation is inadequate, wear a particulate respirator (EN 149, FFP2 or higher).

Do not eat, drink or smoke in work areas. Wash hands and face thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing and wash it before reuse.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Property	Value
Physical state	Solid, free-flowing granule supplied in water-soluble sachets
Colour	White to off-white
Odour	Faint, characteristic
pH	6.0 - 8.0 (aqueous dispersion)
Melting / freezing point	Not applicable (solid formulation; the active substance is released as a gas)
Boiling point / range	Not applicable
Flash point	Not applicable (solid, not flammable)
Flammability	Not flammable as supplied; the released active substance is an extremely flammable gas
Vapour pressure	Not applicable to the granule; the active substance is a gas at ambient temperature
Bulk density	No data available
Solubility	Dispersible in water; on contact with water the granules release 1-methylcyclopropene gas
Partition coefficient (n-octanol/water)	No data available
Auto-ignition temperature	Not applicable (solid formulation)
Explosive properties	Not classified as explosive
Oxidising properties	Not classified as oxidising

9.2 Other information - no additional information available.

10 STABILITY AND REACTIVITY

10.1 Reactivity

Stable and unreactive as supplied. Contact with water releases 1-methylcyclopropene gas, which is extremely flammable.

10.2 Chemical stability

Stable under the recommended storage conditions. The granules are moisture-sensitive: contact with water or high humidity causes premature release of the active substance.

10.3 Possibility of hazardous reactions

No hazardous reactions are expected under normal handling and storage. In confined spaces the released gas can form flammable or explosive mixtures with air.

10.4 Conditions to avoid

Moisture, water and high humidity; heat, direct sunlight, ignition sources and hot surfaces; prolonged storage above 30 degrees C.

10.5 Incompatible materials

Water and aqueous solutions (premature release of the active substance); strong oxidising agents.

10.6 Hazardous decomposition products

On contact with water the active substance is released as a gas. Thermal decomposition may release carbon oxides.

11 TOXICOLOGICAL INFORMATION

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

Endpoint	Result	Species / basis
Acute toxicity, oral	LD50 > 5 000 mg/kg	Rat; active substance (limit dose)
Acute toxicity, dermal	LD50 > 2 000 mg/kg	Rat; active substance

Endpoint	Result	Species / basis
Acute toxicity, inhalation	No acute toxicity at the maximum attainable concentration	Rat, 4 h; active substance
Skin corrosion / irritation	Not irritating	Rabbit; active substance
Serious eye damage / irritation	Not irritating	Rabbit; active substance
Respiratory / skin sensitisation	Not a sensitiser	Guinea pig; active substance
Germ cell mutagenicity	Not classified	In vitro and in vivo data, active substance
Carcinogenicity	Not classified	No evidence of carcinogenic potential
Reproductive toxicity	Not classified	No evidence of reproductive toxicity
STOT - single exposure	Not classified	—
STOT - repeated exposure	Not classified	—
Aspiration hazard	Not classified	—

11.2 Symptoms and effects

The product is of low acute toxicity. Inhalation of high concentrations of the released gas may cause headache, drowsiness, dizziness or nausea. Dust from damaged sachets may cause mechanical irritation of the eyes, skin and respiratory tract. Ingestion may cause gastrointestinal discomfort.

11.3 Other information

1-Methylcyclopropene acts as a plant growth regulator by binding to the ethylene receptor; this mechanism is specific to plants and is not relevant to human health at the concentrations occurring during use. No evidence of carcinogenic, mutagenic or reproductive toxicity was identified in the available studies.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Organism	Result	Test condition
Fish (acute)	Not classified - no acute aquatic hazard identified	Active substance; CLP self-classification
Aquatic invertebrates (acute)	Not classified - no acute aquatic hazard identified	Active substance; CLP self-classification
Algae / aquatic plants	Not classified - no acute aquatic hazard identified	Active substance; CLP self-classification

12.2 Persistence and degradability

1-Methylcyclopropene is a volatile gas. Released to the atmosphere it is short-lived, reacting rapidly with atmospheric ozone (half-life of the order of hours). In soil and water it dissipates mainly by volatilisation. The cyclodextrin carrier is readily biodegradable. The product is not persistent.

12.3 Bioaccumulative potential

Low potential for bioaccumulation. The active substance is a small, volatile molecule that is rapidly eliminated; no significant bioconcentration is expected.

12.4 Mobility in soil

High mobility by volatilisation. The product is applied in closed systems and the released gas disperses in air; residues in soil and water are not expected to persist.

12.5 Results of PBT and vPvB assessment

The product and its active substance do not meet the criteria for PBT or vPvB substances in Annex XIII of Regulation (EC) No 1907/2006 (REACH).

12.6 Endocrine disrupting properties

No endocrine-disrupting properties are identified in accordance with the criteria of Commission Delegated Regulation (EU) 2017/2100.

12.7 Other adverse effects

No other adverse environmental effects are known. 1-Methylcyclopropene is not an ozone-depleting substance and contains no halogenated compounds.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of surplus product, unused sachets and empty packaging in accordance with national and local waste legislation. Do not contaminate water with the product or its packaging. Because contact with water releases the active substance, keep unused sachets dry until they are disposed of and do not dispose of them in drains or watercourses.

- Do not open, cut or pierce the sachets except as directed on the label; unused sachets must be kept dry until they are disposed of.
- Do not dispose of unused sachets in drains, watercourses or household waste; dispose of them through a licensed waste contractor or return them to the supplier where a take-back scheme exists.
- Do not contaminate ponds, watercourses or ditches with the product or the empty packaging.
- Dispose of the outer foil pouch and empty cartons in accordance with national and local regulations.

14 TRANSPORT INFORMATION

Parameter	ADR / RID	IMDG	IATA
UN number	Not regulated	Not regulated	Not regulated
Proper shipping name	Not regulated	Not regulated	Not regulated
Class	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated
Environmental hazard	Not classified	Not classified	Not classified
Tunnel code	-	-	-
EmS / Special	-	-	-

14.6 Special precautions for user

The product is not classified as dangerous goods for transport. Keep the packages dry and protected from moisture; do not transport or store them together with materials that could wet the packages.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable - the product is transported in packaged form only.

15 REGULATORY INFORMATION

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

- The product is a plant protection product and falls within the scope of Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market.
- 1-Methylcyclopropene is not listed in Annex VI to Regulation (EC) No 1272/2008 with a harmonised classification; the classification given in Section 2 is a self-classification.
- National registration, labelling and use restrictions for plant protection products apply in the country of use; the product may be used only in accordance with its national registration.
- Where applicable, observe Directive 2009/128/EC on the sustainable use of pesticides and the national measures implementing it.

15.2 Chemical safety assessment

A chemical safety assessment is not required for this mixture. The active substance has been assessed in the context of its approval as a plant protection active substance; exposure scenarios for the formulated product are covered by the label instructions and the risk assessment performed for the registration.

16 OTHER INFORMATION

16.1 Revision information

Version 1.0 - first issue. This safety data sheet has been prepared for 1-methylcyclopropene 3.3% capsule granule (CG) in accordance with Regulation (EC) No 1272/2008 (CLP) and the 16-section format of Annex II to Regulation (EU) 2020/878. Hazard statements H220 and H280 in Section 16.2 refer to the active substance released on contact with water and do not constitute a classification of the product as supplied.

16.2 Full text of hazard statements referred to in Sections 2 and 3

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

16.3 Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service. CLP: Classification, Labelling and Packaging (Regulation (EC) No 1272/2008). EC50: half maximal effective concentration. GHS: Globally Harmonised System. IMDG: International Maritime Dangerous Goods Code. LC50: lethal concentration, 50 %. LD50: lethal dose, 50 %. OEL: occupational exposure limit. PBT: persistent, bioaccumulative and toxic. PNEC: predicted no-effect concentration. STOT: specific target organ toxicity. vPvB: very persistent and very bioaccumulative.

16.4 Training advice

Users of this product must be trained in safe handling practice, in the correct use of personal protective equipment and in the first-aid measures described in Section 4. Label instructions and national training requirements apply.

16.5 Disclaimer

The information in this safety data sheet is based on the present state of knowledge and current legislation at the date of revision. It describes the product with regard to safety requirements and does not constitute a guarantee of any specific property. It remains the responsibility of the user to ensure that the product is used safely and in accordance with the label and applicable legislation. This safety data sheet is supplied for occupational health and safety purposes only.

© Shanghai Bosman Industrial Co., Limited. All rights reserved.