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

1.1 Product identifier

Sales No. : 3974403
CISTULATE

Substance name : Methyl 3,3-dimethylbicyclo[2.2.1]heptane-2-carboxylate
Identifier
CAS-No. : 52557-97-8
EC-No. : 258-005-0

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

Intended Use Fragrances : Perfumery ingredient

1.3 Details of the supplier of the safety data sheet

Company :
Givaudan Suisse SA
Chemin de la Parfumerie 5
CH-1214 VERNIER

Telephone : +41227809111
Telefax : +41227809150
E-mail address : global.msds_fragrances_raps@givaudan.com
Responsible/issuing person

1.4 Emergency Call

Givaudan 24/7 call : +33172110003

Please refer to section 16 for a full list of emergency phone numbers, from Givaudan's 24/7 provider.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

2.3 Other hazards

Hazards not Otherwise Classified. : None

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. Composition/information on ingredients

3.1 Substances

Remarks : No hazardous ingredients

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice : Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
If on skin, rinse well with water.

In case of eye contact : Remove contact lenses.
Immediately flush eyes for at least 15 minutes. Get medical attention.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : no data available
Risks : no data available

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : no data available

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical
Alcohol-resistant foam
Carbon dioxide (CO2)
Water spray

Unsuitable extinguishing media : no data available

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : no data available

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : no data available

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Not applicable

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Temperature class	:	no data available
Fire-fighting class	:	no data available
Dust explosion class	:	no data available

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	Ambient / 10-30℃ (50-85℉) Dry, well ventilated, preferably full, hermetically sealed
Advice on common storage	:	Protect against light.
Storage class (TRGS 510)	:	10 Combustible liquids
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	no data available

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Exposure assessment: Exposures are dependent on the product being handled, the potential for chemical release, and any resulting airborne concentrations or dermal contact. Since product handling and release scenarios vary, and no two workplaces are exactly alike, it is recommended that the potential for exposure be assessed prior to the prod-uct's use or introduction. Exposure assessments should be performed by an occupational hygienist, industrial hygienist, or other qualified occupational or environmental health professional. An exposure assessment should be conducted to determine the efficacy of any ventilation and the need for additional PPE. The PPE indicated below are recommendations for worst-case scenario exposures. An exposure assessment will identify more applicable measures to be implemented. EN and ANSI standards are mentioned in the following recommendations, consult equivalent local standards when required.
PPE is always the last resort to avoid exposure. In any case technical and organisational

measures have to be explored and used prior to the selection of PPE. The PPE selection is for operators trained to work with chemicals according to good industrial hygiene and safety practice. Operators have to be trained on the use of PPE.

8.2.1 Engineering measures

Use engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use the product only with adequate ventilation.

8.2.2 Personal protective equipment

Eye/face protection	:	Use safety goggles tested according to EN 166/ ANSI Z87.1 or equivalent local standard.
Hand protection	:	Use gloves when handling substance in open systems. Inspect gloves prior to use. Train operators for proper use.If only incidental exposure is expected: (work without direct contact to substance) use gloves tested according EN 16523-1/ASTM F739 or equivalent local standard breakthrough times at least 10 minutes, tested for chemicals indicated in chapter 3 of this SDS. Change gloves frequently. If direct skin contact is expected: use gloves tested according to EN 16523-1/ASTM F739 or equivalent local standard, tested for chemicals indicated in chapter 3 of this SDS. Permeation time must exceed contact time.
Other skin protection	:	Wear working clothes covering arms and legs.
Respiratory protection	:	Respiratory protection should be worn when workplace exposures exceed exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, use an approved respirator where there is a potential for adverse effects, including but not limited to respiratory irritation or odor, or where indicated by the exposure assessment. Selection of air-purifying or positive-pressure supplied-air will depend on the results of the exposure assessment which includes an evaluation of the specific operations and the potential airborne concentrations. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In case a risk analysis proved the cartridge respirator as acceptable, use type: ABEK-P3 (EN 14387) OR Combination Multi-gas/P100 (42CFR84.193; ANSI Z88.7 or equivalent local standard) as a backup to engineering controls. In absence of engineering controls, use self-contained breathing apparatus or full face supplied air respirators. Use respirators and components tested and approved under

		appropriate government standards such as CEN (EU) or NIOSH 42 CFR 84(US).
Thermal hazards	:	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	:	Remove contaminated clothing and protective equipment before entering eating areas. Do not eat, drink or smoke during work. Wash hands any time after handling the product.

8.2.3 Environmental exposure controls

General advice	:	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Form	:	liquid
Colour	:	colorless
Taste	:	not determined
Odour	:	Pine-like, fruity, Fresh
Odour Threshold	:	no data available
Flash point	:	83 ℃ Method: closed cup
Lower explosion limit	:	not determined
Upper explosion limit	:	not determined
Flammability	:	no data available
Oxidizing properties	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Molecular weight	:	182,60 g/mol
pH	:	no data available
Melting point	:	not determined
Boiling point	:	223 ℃ at 1 013 hPa
Vapour pressure	:	0,01 hPa at 20 ℃
Density	:	1 007,18 kg/m3 at 20 ℃
Bulk density	:	Not applicable
Water solubility	:	no data available
Solubility/qualitative	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Viscosity, kinematic	:	no data available
Relative vapour density	:	no data available
Evaporation rate	:	no data available
Explosive properties	:	no data available

9.2 Other information

Not applicable

SECTION 10. Stability and reactivity

10.1 Reactivity

none

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Stable under recommended storage conditions., No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid	:	no data available

10.5 Incompatible materials

Materials to avoid	:	no data available

10.6 Hazardous decomposition products

Hazardous decomposition products	:	no data available
Thermal decomposition	:	no data available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	:	LD50 Rat Dose: 11 760 mg/kg
Acute inhalation toxicity	:	This information is not available.
Acute dermal toxicity	:	This information is not available.
Acute toxicity (other routes of administration)	:	No data is available on the product itself.

Skin corrosion/irritation

Skin irritation	:	No data is available on the product itself.

Serious eye damage/eye irritation

Eye irritation : No data is available on the product itself.

Respiratory or skin sensitisation

Sensitisation : No data is available on the product itself.

Germ cell mutagenicity

Genotoxicity in vitro : Ames test
negative

Carcinogenicity

Carcinogenicity : No data is available on the product itself.

Reproductive toxicity : No data is available on the product itself.

Target Organ Systemic Toxicant - Single exposure

Target Organ Systemic Toxicant - Single exposure : No data is available on the product itself.

Target Organ Systemic Toxicant - Repeated exposure

Target Organ Systemic Toxicant - Repeated exposure : No data is available on the product itself.

Aspiration hazard

Aspiration toxicity : No data is available on the product itself.

Phototoxicity

Phototoxicity : No data is available on the product itself.

Further information : no data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : no data available

SECTION 12. Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

Product:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 65 %
Exposure time: 28 d
Method: OECD Test Guideline 301 F
Remarks: The 10 day time window criterion is not fulfilled.

Result: Inherently biodegradable.
Biodegradation: 65 %
Exposure time: 28 d
Method: OECD Test Guideline 301 F
Remarks: The 10 day time window criterion is not fulfilled.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : no data available

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

Dispose of in accordance with local regulations.

SECTION 14. Transport information

14.1 UN number

N/A

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

N/A

14.4 Packing group

N/A

14.5 Environmental hazards

N/A

14.6 Special precautions for user

IMDG

IMDG Code Segregation Group : None

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

Not applicable for product as supplied.

SECTION 15. Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Neither banned nor restricted

Major Accident Hazard Legislation : Not applicable

Water hazard class (Germany) : WGK 3 highly hazardous to water
Classification according to AwSV, Annex 1 (4)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. Other information

Full list of Emergency response numbers worldwide.

	Country	Phone nr		Country	Phone nr
Europe	All Europe	+44 1235 239670	APAC	All East/South East Asia	+65 3158 1074
	France	+33 1 72 11 00 03		Sri Lanka	+65 3158 1195
	Germany	+49 89 220 61012		Taiwan	+886 2 8793 3212
	Spain	+34 91 114 2520		Japan	0120 015 230
	Italy	800 699 792		Indonesia	007 803 011 0293
	Netherlands	+31 10 713 8195		Malaysia	+60 3 6207 4347
	Turkey	0800 621 2139 +44 1235 239670		Thailand	001 800 120 666 751
	Norway	+47 2103 4452		India	+65 3158 1198 000 800 100 7479
	Greece	+30 21 1198 3182		Pakistan	+65 3158 1329
	Portugal	+351 30880 4750		Bangladesh	+65 3158 1200
	Denmark	+45 8988 2286		Philippines	+63 2 8231 2149
	Sweden	+46 8 566 42573		Vietnam	+84 28 4458 2388
	Poland	+48 22 307 3690		Korea	+65 3158 1285
	Czech replublic	+420 228 882 830		South Korea	+82 2 3479 8401
	Finland	+358 9 7479 0199		Australia	+61 2 8014 4558
Middle East/Africa	All Middle East/Africa	+44 1235 239671		New Zealand	+64 9 929 1483
	Bahrain and Middle East	+44 1235 239671		China	+86 532 8388 9090
	Africa/South Africa	+27 21 300 2732	LATAM	Mexico	+52 55 5004 8763
NOAM	USA and Canada	+1 866 928 0789		Brazil	+55 11 3197 5891

Administrative information:
Report Information: SDS_FR/EN/GHS_SDS_EU_CNTRY/39
Sales & Distribution Information: VE01/FR/CH11/01
Shipping Order Information: 24 610 658/18 836 580

	USA and Canada	+1 215 207 0061		Chile	+56 2 2582 9336
	USA and Canada	+1 202 464 2554		Colombia	+57 1 508 7337
Global	Global	+44 1865 407333		Argentina	+54 11 5984 3690

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

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Information displayed in section 3 (Composition/information on ingredients) is additional information to understand the hazards of the product and ensure safe handling, storage and transportation. This information, including CAS numbers, is not meant to be used for registration, notification or any other purposes. Any additional information and documentation needed may be provided by Givaudan.

Administrative information:
Report Information: SDS_FR/EN/GHS_SDS_EU_CNTRY/39
Sales & Distribution Information: VE01/FR/CH11/01
Shipping Order Information: 24 610 658/18 836 580