



Safety Data Sheet (SDS)

According to Regulation (EC) No 453/2010

BioGenic Gentinol-200

Revision date: 2018-03-15

Version: SDS-BGGT200-EU-1.5.E

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

1.1. Product identifier

Trade name/designation : BioGenic Gentinol-200

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

1.2.1. Relevant identified uses

- Anti-Wrinkle , Personal care products.

1.2.2. Uses advised against

- Use for 'recommended use' only

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier : BioGenics, Inc.

Address : 40, Techno-ro 11, Yuseong-gu Daejeon, 305-510, Korea.

Telephone : +82-42-671-1216

Email : hsshin@biogenics.co.kr

1.4. Emergency telephone number

EU-wide emergency number : 112

See section 16.6 for the list of telephone number of poison centers in the European Economic Area.

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the substance/mixture

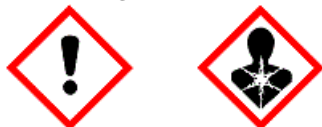
2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP]

- Skin corrosion/irritation : Category2, H315
- Serious eye damage/irritation : Category2, H319
- Carcinogenicity : Category1B, H350
- Chronic aquatic toxicity : Category3, H412

2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

* Hazard Pictogram(s)



* Signal word : Danger

* Hazard statement(s)

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H350 May cause cancer
- H412 Harmful to aquatic life with long lasting effects

* Precautionary statement(s)

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.

- P264 Wash hands thoroughly after handling.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

2) Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P321 Specific treatment
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.

3) Storage

- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3. Other hazards

- Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

- Not applicable

3.2. Mixtures

Name	INCI Name	CAS No.	% [weight]	Classification [1272/2008/EC]
Water	Water	7732-18-5	Too. 100	Not classified
Methyloxirane polymer with oxirane	Poloxamer 235	9003-11-6	21.32 ~ 23.32	Not classified
(all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexene-1-yl)-2,4,6,8-nonatetraen-1-ol	Retinol	68-26-8	9.00 ~ 11.00	Aquatic Chronic 4, H413 Ox. Gas 1, H270 Eye Irrit. 2, H319
Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.	Polysorbate 20	9005-64-5	7.50 ~ 9.50	Eye Irrit. 2, H319 Skin Irrit. 2, H315
L-Ascorbic acid	Sodium Ascorbate	50-81-7	4.00 ~ 6.00	STOT SE 3, H335
(2R,3R)-2-(3,4,5-Trihydroxyphenyl)-3,4-di hydro-1[2H]-benzopyran-3,5,7-triol-3-(3,4,5-trihydroxybenzoate)	Epigallocatechin Gallate	989-51-5	2.72 ~ 4.72	Not classified
2,6-di-tert-butyl-p-cresol	BHT	128-37-0	0.60 ~ 0.80	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1, H317
Ethylenediaminetetraacetic acid disodium salt	Disodium EDTA	139-33-3	0.42 ~ 0.62	Acute Tox. 4, H302
Ethylene Glycol Phenyl Ether	Phenoxyethanol	122-99-6	0.12 ~ 0.32	Acute Tox. 4, H302 Eye Irrit. 2, H319
1,1-(Dimethylethyl)-4-methoxyphenol	BHA	25013-16-5	0.10 ~ 0.30	Acute Tox. 4, H302 Carc. 1B, H350

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General

- No general information.

Inhalation

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Remove contact lenses if worn.

Ingestion

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Not available

4.3. Indication of any immediate medical attention and special treatment needed

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

Unsuitable extinguishing media

- Avoid use of water jet for extinguishing

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

- Not available

5.3. Advice for firefighters

- Move containers from fire area, if you can do without the risk.
- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Do not access if the tank on fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Use fire fighting procedures suitable for surrounding area.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment: Wear proper protective equipment.
- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.

6.1.2. For emergency responders

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

6.2. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.
- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

6.3. Methods and material for containment and cleaning up**6.3.1. For containment**

- Control personal contact by using protective equipment.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.

6.3.2. For cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Prevent the influx to waterways, sewers, basements or confined spaces.
- Spilled material should be treated as a potential risk of waste collected.

6.3.3. Other information

- Slippery when spilt.

6.4. 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 information on disposal.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.
- Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Check regularly for leaks.
- Keep sealed when not in use.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.
- By specifying a storage area for carcinogenic substances.

- Collected them in sealed containers.
- Store away from water and sewer.

7.3. Specific end use(s)

- See Section 1 for information on 1.2 Relevant identified uses.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational exposure limits

European Union (EU) Commission Directive 2006/15/EC (IOELVs)

- Not available

European Union (EU) Commission Directive 2006/15/EC (IOELVs) - Skin

- Not available

8.1.2. Recommended Monitoring Procedures

- Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

8.1.3. DNEL/PNEC - Values

- Not available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

8.2.2. Individual protection measures, such as personal protective equipment

Hand protection

- Wear appropriate glove.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Respiratory Protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Skin protection

- Wear appropriate clothing.

Others

- It is necessary to wear protective clothes and other protection equipment. Cover your face, head and neck.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.

Thermal hazards

- Not available

8.2.3 Environmental exposure controls

- Do not let product enter drains. For ecological information refer to section 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance(State)	Viscous gel
Appearance(Color)	Yellow
Odor	Characteristic
Odor threshold	Not available
pH	Not available
Melting point/Freezing point	Not available
Initial boiling point and boiling range	Not available
Flash point	Not determined (above 100 °C)
Evaporation rate	Not available
Flammability(solid, gas)	Not applicable
Upper/Lower Flammability or explosive limits	Not applicable
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	Water : Insoluble, Mineral Oil : Insoluble , Ethanol : soluble, Butylene Glycol : soluble
Partition coefficient of n-octanol/water	Not available
Autoignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not to be expected in view of the composition
Oxidising properties	Not available

9.2. Other information

- Not available

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

- Not available

10.2. Chemical Stability

- This material is stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.4. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

10.5. Incompatible materials

- Not available

10.6. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Acute toxicity**

- **Oral - ATE MIX : >5000mg/kg**
 - [Water] : LD50 = 90000 mg/kg Rat
 - [Methyloxirane polymer with oxirane] : LD50 = 5000 mg/kg Rat
 - [(all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexene-1-yl)-2,4,6,8-nonatetraen-1-ol] : LD50 2570 mg/kg (mouse(10days))
 - [Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.] : LD50 = 36700 mg/kg Rat
 - [L-Ascorbic acid] : LD50 > 5000 mg/kg Rat
 - [2,6-di-tert-butyl-p-cresol] : LD50 = 1559 mg/kg Rat

- [Ethylenediaminetetraacetic acid disodium salt] : LD50 2000 mg/kg Rat
- [Ethylene Glycol Phenyl Ether] : LD50 = 300 ~ 2000 mg/L
- [1,1-(Dimethylethyl)-4-methoxyphenol] : LD50 2000 mg/kg Rat
- **Dermal - ATE MIX : Not available**
- [2,6-di-tert-butyl-p-cresol] : LD50 > 2000 mg/kg Rat
- **Inhalation - ATE MIX : Not available**
- Not available

11.2. Skin corrosion/irritation

- Causes skin irritation

11.3. Serious eye damage/irritation

- Causes serious eye irritation

11.4. Respiratory sensitization

- Not available

11.5. Skin sensitization

- Not available

11.6. Germ cell mutagenicity

- Not available

11.7. Carcinogenicity

- **IARC**
 - [1,1-(Dimethylethyl)-4-methoxyphenol] : Group 2B
 - [2,6-di-tert-butyl-p-cresol] : Group 3
- **OSHA**
 - Not available
- **ACGIH**
 - [2,6-di-tert-butyl-p-cresol] : A4
- **NTP**
 - [1,1-(Dimethylethyl)-4-methoxyphenol] : R
- **EU CLP**
 - Not available

11.8. Reproductive toxicity

- Not available

11.9. Specific target organ toxicity(single exposure):

- Not available

11.10. Specific target organ toxicity(repeated exposure):

- Not available

11.11. Aspiration hazard

- Not available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Fish

- [L-Ascorbic acid] : LC50 = 13.311 mg/l 96 hr
- [Ethylenediaminetetraacetic acid disodium salt] : LC50 320 mg/l 96 hr *Poecilia reticulata*
- [1,1-(Dimethylethyl)-4-methoxyphenol] : LC50 3.154 mg/l 96 hr

12.1.2. Invertebrate

- [L-Ascorbic acid] : LC50 = 1644.468 mg/l 48 hr

- [2,6-di-tert-butyl-p-cresol] : EC50 = 0.84 mg/ℓ 48 hr
- [1,1-(Dimethylethyl)-4-methoxyphenol] : LC50 2.362 mg/ℓ 48 hr

12.1.3. Algae

- [L-Ascorbic acid] : EC50 = 140.284 mg/ℓ 96 hr
- [1,1-(Dimethylethyl)-4-methoxyphenol] : EC50 4.211 mg/ℓ 96 hr

12.2. Persistence and degradability

12.2.1. Persistence

- [Water] : log Kow = -1.38
- [(all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexene-1-yl)-2,4,6,8-nonatetraen-1-ol] : log Kow 5.68
- [Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.] : log Kow = -2.03 (Estimates)
- [L-Ascorbic acid] : log Kow = -2.15
- [Ethylenediaminetetraacetic acid disodium salt] : log Kow -11.70 ((Estimates))
- [1,1-(Dimethylethyl)-4-methoxyphenol] : log Kow 3.5

12.2.2. Degradability

- Not available

12.3. Bioaccumulative potential

12.3.1. Bioaccumulation

- [(all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexene-1-yl)-2,4,6,8-nonatetraen-1-ol] : BCF 4716
- [Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.] : BCF = 3.16 (Estimates)
- [2,6-di-tert-butyl-p-cresol] : BCF = 2800
- [Ethylenediaminetetraacetic acid disodium salt] : BCF 3.162
- [1,1-(Dimethylethyl)-4-methoxyphenol] : BCF 35.27

12.3.2. Biodegradability

- [2,6-di-tert-butyl-p-cresol] : Biodegradability = 4.5 (%)

12.4. Mobility in soil

- [Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.] : Koc = 239700000 (Can be adsorbed in the soil, Estimates)

12.5. Results of PBT and vPvB assessment

- Not available

12.6. Other adverse effects

- Harmful to aquatic life with long lasting effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. UN No.

14.1.1. UN No. (ADR/RID/ADN)

- Not applicable

14.1.2. UN No. (IMDG)

- Not applicable

14.1.3. UN No. (ICAO)

- Not applicable

14.1.4. UN No. (IATA)

- Not applicable

14.2. UN proper shipping name

- Not applicable

14.3. Transport hazard class(es)**14.3.1. ADR/RID/ADN Class**

- Not Hazardous for Transport

14.3.2. ADR/RID/ADN Class

- Not Hazardous for Transport

14.3.3. ADR Label No.

- Not applicable

14.3.4. IMDG Class

- Not Hazardous for Transport

14.3.5. ICAO Class/Division

- Not Hazardous for Transport

14.3.6. IATA Class/Division

- Not Hazardous for Transport

14.3.7. Transport Labels

- Not applicable

14.4. Packing group**14.4.1. ADR/RID/ADN Packing group**

- Not applicable

14.4.2. IMDG Packing group

- Not applicable

14.4.3. ICAO Packing group

- Not applicable

14.4.4. IATA Packing group

- Not applicable

14.5. Environmental hazards

- Not applicable

14.6. Special precautions for user

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not applicable
- EmS SPILLAGE SCHEDULE : Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not applicable

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulation / legislation specific for the substance or mixture****15.1.1. Europe regulatory**

REACH Restricted substance under REACH

- Not applicable

REACH Substances subject to authorization under REACH

- Not applicable

REACH SVHC

- Not applicable

Europe PBT

- Applicable (2,6-di-tert-butyl-p-cresol)

European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List

- Not applicable

15.2. Chemical Safety Assessment

- Not conducted

SECTION 16: OTHER INFORMATION**16.1. Indication of changes**

- The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EU) No. 453/2010

16.2. Abbreviations and acronyms

- 1272/2008 CLP : Classification, Labelling and Packaging regulation.
- REACH : Registration, Evaluation and authorisation of chemical substances.
- DNEL : Derive no effects level
- PNEC : Predicted no effect concentration

16.3. Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

16.4. Classification procedure

- The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

16.5. Training advice

- Not applicable

16.6. Further information

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.
- This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.
- It should not therefore be construed as guaranteeing any specific property of the product.
- Contact a poison control centre, List of Telephone Numbers : AUSTRIA (Vienna Wien) +43 1 406 43 43; BELGIUM (Brussels Bruxelles) +32 70 245 245; BULGARIA (Sofia) +359 2 9154 409; CZECH REPUBLIC (Prague Praha) +420 224 919 293; DENMARK (Copenhagen) 82 12 12 12; ESTONIA (Tallinn) 112; FINLAND (Helsinki) +358 9 471 977; FRANCE (Paris) +33 1 40 0548 48; GERMANY (Berlin) +49 30 19240; GREECE (Athens Athinai) +30 10 779 3777; HUNGARY (Budapest) 06 80 20 11 99; ICELAND (Reykjavik) +354 525 111, +354 543 2222; IRELAND (Dublin) +353 1 8379964; ITALY (Rome) +39 06 305 4343; LATVIA (Riga) +371 704 2468; LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378; MALTA (Valletta) 2425 0000; NETHERLANDS (Bilthoven) +31 30 274 88 88; NORWAY (Oslo) 22 591300; POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831; PORTUGAL (Lisbon Lisboa) 808 250 143; ROMANIA (Bucharest) +40 21 3183606 SLOVAKIA (Bratislava) +421 2 54 77 4166; SLOVENIA (Ljubljana) + 386 41 650 500; SPAIN (Barcelona) +34 93 227 98 33 or +34 93 227 54 00 bleep 190; SWEDEN (Stockholm) 112 or +46 8 33 12 31 (mon-fri 9.00-17.00); UNITED KINGDOM (London) 112 or 0845 4647 (NHS