

Revision date 18-Jan-2024

Revision Number 2

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

1.1. Product identifier

Product Name LAMINEX® Super 3G
Product Code(s) A30176
Pure substance/mixture Mixture

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

Recommended use Food industry
Uses advised against None under normal use conditions

1.3. Details of the supplier of the safety data sheet

Supplier

International Flavors & Fragrances Inc.
Edwin Rahrs Vej 38
DK-8220 Brabrand
Danmark
Tel.: +4570712240
Fax.: +45 8943 1077

E-mail address

sds.genencor@iff.com

1.4. Emergency telephone number

Emergency Telephone +32 (0) 50 44 91 73
United Kingdom Local (London): +44 20 3807 3798

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

| | |
|----------------------------------|---------------------|
| Respiratory sensitisation | Category 1 - (H334) |
|----------------------------------|---------------------|

2.2. Label elements

Contains Cellulase



Signal word

Danger

Hazard statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances*** Not applicable***

3.2 Mixtures***

Chemical nature

Preparation***

| Chemical name | Weight-% | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended) | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------|----------|---------------------|------------------------------|--|------------------------------------|----------|----------------------|
| Cellulase 9012-54-8 | 5 - 10 | 232-734-4 | - | Resp. Sens. 1 (H334)*** | - | - | - |

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures****4.1. Description of first aid measures****General advice**

When in doubt or if symptoms are observed, get medical advice.***

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.***

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.***

Skin contact

IF ON SKIN: Wash with plenty of water and soap.***

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth thoroughly with water.***

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Most important symptoms and effects, both acute and delayed.***

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media Dry powder. Foam. Water spray. Carbon dioxide (CO₂).***

Unsuitable extinguishing media None.***

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Avoid dust formation.

Hazardous combustion products No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.***

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions Avoid generation of dust and aerosols. Avoid breathing dust or spray mist. Use personal protection recommended in Section 8.***

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Cover with absorbent or contain. Collect and dispose.***

Methods for cleaning up Use appropriate personal protective equipment (PPE). Contain and/or absorb spill with inert material, then place in suitable container. Prevent runoff from entering drains, sewers or waterways.***

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

| | |
|---------------------------------------|---|
| Advice on safe handling | Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.*** |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.*** |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|---------------------------|--|
| Storage Conditions | Keep/store only in original container. Keep container tightly closed in a dry and well-ventilated place. |
|---------------------------|--|

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| | |
|------------------------|--|
| Exposure Limits | Based on data available for ingredients. |
|------------------------|--|

Derived No Effect Level (DNEL) Derived minimal effect level (DMEL) of 60 ng/m³ for workers and 15 ng/m³ for consumers has been derived for enzyme proteins

Derived No Effect Level (DNEL) - Workers No information available.***

Derived No Effect Level (DNEL) - General Public No information available.***

8.2. Exposure controls

| | |
|-----------------------------|---|
| Engineering controls | Transfer via enclosed lines or with a method that minimises dust/aerosol generation. Carefully handle the substance to minimise releases. Avoid generation of dust and aerosols.*** |
|-----------------------------|---|

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).***

Hand protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.***

Skin and body protection Wear protective gloves and protective clothing.***

Respiratory protection If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.***

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.***

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

| | |
|-----------------|------------------------------------|
| Physical state | Liquid |
| Colour | clear brown |
| Odour | Typical odour of fermented product |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|--------------------------|-------------------------|
| Melting point / freezing point | No data available | None known |
| Initial boiling point and boiling range | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Flash point | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | | None known |
| pH | 3.7 - 4.2 | None known |
| pH (as aqueous solution) | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |
| Water solubility | No data available | None known |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Vapour pressure | No data available | None known |
| Relative density | 1.05-1.11 kg/l | None known |
| Bulk density | No data available | |
| Liquid Density | No data available | |
| Relative vapour density | No data available | None known |
| Particle characteristics | | |
| Particle Size | No information available | |
| Particle Size Distribution | No information available | |
| Explosive properties | No information available | |
| Oxidising properties | No information available | |

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not expected.***

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact No.
Sensitivity to static discharge No.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known.***

SECTION 11: Toxicological information

11.1. Toxicological information

Information on likely routes of exposure

Product Information

Acute toxicity

Inhalation See section 2 for classified hazards based on component information.***

Eye contact See section 2 for classified hazards based on component information.***

Skin contact See section 2 for classified hazards based on component information.***

Ingestion See section 2 for classified hazards based on component information.***

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause allergy or asthma symptoms or breathing difficulties if inhaled.***

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation Respiratory: May cause sensitisation in susceptible persons. Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals.***

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects None known.***

Numerical measures of toxicity

Component Information Classification based on data available for ingredients

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|---------------------|-------------|---------------------|
| Cellulase | >2880 mg/kg (Rat) | - | >4 mg/L (Rat) 4 h |

Cellulase 9012-54-8

| | |
|-------------------------------|---|
| Eye irritation | Non-irritant |
| Skin irritation | Non-irritant |
| Respiratory irritation | Not expected |
| Sensitisation | Respiratory: May cause sensitisation in susceptible persons Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals Not a skin sensitiser |
| Reproductive effects | No information available |
| Mutagenic effects | OECD Test No. 471: Bacterial Reverse Mutation Test: Negative. OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test: Negative. |
| Systemic Toxicity | OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents: NOAEL (No observed adverse effect level) = 1000 mg/kg bw/d. |
| Carcinogenicity | Not expected |
| Teratogenicity | Not expected |

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-vapour) 84.60 mg/l

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Based on data available for ingredients.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Predicted No Effect Concentration (PNEC)

| Chemical name | Freshwater | Freshwater (intermittent release) | Marine water | Marine water (intermittent release) | Air |
|---------------------|------------|-----------------------------------|--------------|-------------------------------------|-----|
| Cellulase 9012-54-8 | 23.7 µg/L | 237 µg/L | 2.37 µg/L | - | - |

| Chemical name | Freshwater sediment | Marine sediment | Sewage treatment | Soil | Food chain |
|------------------------|---------------------|-----------------|------------------|--------------------|------------|
| Cellulase 9012-54-8 | - | - | 65000 µg/L | 3.76 µg/kg soil dw | - |

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|---|--|----------------------------|--|
| Cellulase | EC50: >100 mg/L TOS (72h, Pseudokirchneriella subcapitata). NOEC: >=100 mg/L (72h, Pseudokirchneriella subcapitata) | LC50: >100 mg/L TOS (96h, Oncorhynchus mykiss). NOEC: =45.5 mg/L TOS (96h, Oncorhynchus mykiss) | - | EC50: >100 mg/L TOS (48h, daphnia). NOEC: >=100 mg/L TOS(48h, daphnia) |

12.2. Persistence and degradability

Persistence and degradability Based on data available for ingredients.***

| Chemical name | Biodegradation |
|------------------------|---|
| Cellulase 9012-54-8 | Readily biodegradable >70% 6 days later |

12.3. Bioaccumulative potential

Bioaccumulation Based on data available for ingredients.

| Chemical name | Bioaccumulation/Accumulation |
|---------------|------------------------------|
| Cellulase | No bioaccumulation potential |

Component Information

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Cellulase | -1.3 |

12.4. Mobility in soil

Mobility in soil Soluble in water.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment Based on data available for ingredients.

| Chemical name | PBT and vPvB assessment |
|---------------|---------------------------------|
| Cellulase | The substance is not PBT / vPvB |

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| Waste from residues/unused products | Dispose of wastes in an approved waste disposal facility. Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable. |
| Contaminated packaging | Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations.*** |

SECTION 14: Transport information

IATA

| | |
|------------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special Precautions for Users | |
| Special Provisions | None |

IMDG

| | |
|--|--------------------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special Precautions for Users | |
| Special Provisions | None |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

RID

| | |
|------------------------------------|----------------|
| 14.1 UN number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special Precautions for Users | |
| Special Provisions | None |

ADR

| | |
|------------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 UN proper shipping name | Not regulated |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special Precautions for Users | |
| Special Provisions | None |

SECTION 15: Regulatory information

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

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

| Chemical name | AICS | DSL/NDSL | EINECS/ELINCS | ENCS | IECSC | KECL | PICCS |
|------------------------|------|----------|---------------|------|-------|------|-------|
| Cellulose 9012-54-8 | X | X | X | - | X | X | X |

15.2. Chemical safety assessment**Chemical Safety Report**

No information available

SECTION 16: Other information**Full text of H-Statements referred to under section 3**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Legend**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**Revision date**

18-Jan-2024

Reason for revision

***Indicates updated section

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work****Disclaimer****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.

End of Safety Data Sheet