



Harlequin® Chromogenic Agar for Salmonella Esterase (CASE)

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 12/17/2024 Revision date: 6/9/2025 Supersedes: 3/26/2025 Version: 2.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Harlequin® Chromogenic Agar for Salmonella Esterase (CASE)
Product code : NCM1006

1.2. Other means of identification

Part Number(s) : NCM1006|700004800|700004801|700004804

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development

1.4. Supplier's details

Neogen Corporation
620 Leshar Place
Lansing, Michigan 48912
United States of America
T 800.234.5333
sds@neogen.com - <https://www.neogen.com/>

1.5. Emergency phone number

Emergency number : 24 hours:
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Skin sensitization, Category 1 H317 May cause an allergic skin reaction.
Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
Hazard statements (GHS US) : H317 - May cause an allergic skin reaction
Precautionary statements (GHS US) : P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P302+P352 - If on skin: Wash with plenty of water.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.

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P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

35.08% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
66.15% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
51.11% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|---------------------|--------------------|---------|--|
| Kaolin | CAS-No.: 1332-58-7 | 15 – 25 | Acute Tox. 4 (Inhalation:dust,mist), H332 |
| Sodium deoxycholate | CAS-No.: 302-95-4 | 1 – 5 | Acute Tox. 4 (Oral), H302 STOT SE 3, H335 |
| Oxbile (Oxgall) | CAS-No.: 8008-63-7 | 1 – 5 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |
| D-(+)-Cellobiose | CAS-No.: 528-50-7 | 1 – 5 | Aquatic Acute 2, H401 Aquatic Chronic 2, H411 |
| Sodium pyruvate | CAS-No.: 113-24-6 | 1 – 5 | Eye Irrit. 2, H319 Skin Sens. 1B, H317 |

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs:
Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : May cause an allergic skin reaction.

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Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13

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SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Storage temperature : 2 – 8 °C
- Packaging materials : Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Kaolin (1332-58-7)

USA - ACGIH - Occupational Exposure Limits

| | |
|----------------------|---|
| Local name | Kaolin |
| ACGIH® TLV® TWA | 2 mg/m ³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) |
| Remark (ACGIH) | TLV® Basis: Pneumoconiosis. Notations: A4 (Not classifiable as a Human Carcinogen) |
| Regulatory reference | ACGIH 2025 |

USA - OSHA - Occupational Exposure Limits

| | |
|--------------------------------|--|
| Local name | Kaolin |
| OSHA PEL TWA | 15 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction) |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

USA - Cal/OSHA - Occupational Exposure Limits

| | |
|------------------------|--|
| Local name | Kaolin; (containing no asbestos and <1% crystalline silica) |
| Cal/OSHA PEL (OEL TWA) | 2 mg/m ³ (Respirable dust) |
| Regulatory reference | California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1) |

USA - NIOSH - Occupational Exposure Limits

| | |
|---------------------------------|--|
| Local name | Kaolin |
| NIOSH REL 10h TWA | 10 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction) |
| Regulatory reference (US-NIOSH) | OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG)) |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

| |
|--|
| Hand protection: |
| Protective gloves |
| Eye protection: |
| Safety glasses |
| Skin and body protection: |
| Wear suitable protective clothing |
| Respiratory protection: |
| In case of insufficient ventilation, wear suitable respiratory equipment |

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|---------------------|
| Physical state | : Solid |
| Appearance | : Powder. |
| Color | : Off-white |
| Odor | : Characteristic |
| Odor threshold | : No data available |
| pH | : 7.1 – 7.5 |
| Melting point | : No data available |
| Freezing point | : Not applicable |
| Boiling point | : No data available |
| Flash point | : Not applicable |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20°C | : No data available |
| Relative density | : No data available |
| Solubility | : Soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : Not applicable |
| Explosion limits | : Not applicable |
| Particle characteristics | : No data available |

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified.

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| | |
|---------------------------------|--|
| Unknown acute toxicity (GHS US) | 35.08% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 66.15% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 51.11% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)) |
|---------------------------------|--|

Kaolin (1332-58-7)

| | |
|-----------------------------------|--|
| LD50 oral rat | > 5000 mg/kg Source: HSDB |
| LD50 dermal rat | > 5000 mg/kg Source: HSDB |
| LC50 Inhalation - Rat (Dust/Mist) | ≥ 5 mg/l Source: OSHRI GLP toxicity test |
| ATE US (dust, mist) | 1.5 mg/l/4h |

Sodium pyruvate (113-24-6)

| | |
|-----------------|---|
| LD50 oral | 3533 mg/kg body weight (Mouse, Experimental value, Oral) |
| LD50 dermal rat | > 3000 mg/kg body weight (Rat, Male, Experimental value, Intraperitoneal) |
| ATE US (oral) | 3533 mg/kg body weight |

Sodium deoxycholate (302-95-4)

| | |
|---------------|------------------------|
| LD50 oral rat | 1370 mg/kg (Rat, Oral) |
| ATE US (oral) | 1370 mg/kg body weight |

Skin corrosion/irritation : Not classified
pH: 7.1 – 7.5

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| Kaolin (1332-58-7) | |
|--------------------------------|------------------|
| pH | 4.5 Source: hsdB |
| Sodium pyruvate (113-24-6) | |
| pH | 7 (10 %) |
| Sodium deoxycholate (302-95-4) | |
| pH | 7.5 – 9 (2 %) |

Serious eye damage/irritation : Not classified
pH: 7.1 – 7.5

| Kaolin (1332-58-7) | |
|--------------------------------|------------------|
| pH | 4.5 Source: hsdB |
| Sodium pyruvate (113-24-6) | |
| pH | 7 (10 %) |
| Sodium deoxycholate (302-95-4) | |
| pH | 7.5 – 9 (2 %) |

Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

| Ox bile (Oxgall) (8008-63-7) | |
|--------------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
| Sodium deoxycholate (302-95-4) | |
| STOT-single exposure | May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

| Harlequin® Chromogenic Agar for Salmonella Esterase (CASE) | |
|--|------------------------|
| Viscosity, kinematic | Not applicable |
| Sodium pyruvate (113-24-6) | |
| Viscosity, kinematic | Not applicable (solid) |
| Sodium deoxycholate (302-95-4) | |
| Viscosity, kinematic | Not applicable (solid) |

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

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SECTION 12 Ecological information

12.1. Ecotoxicity

| | |
|---|--|
| Ecology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

| D-(+)-Cellobiose (528-50-7) | |
|------------------------------------|--|
| EC50 - Crustacea [1] | > 100 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | ≈ 21.86 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | ≈ 4.6 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum) |

| Sodium pyruvate (113-24-6) | |
|-----------------------------------|--|
| LC50 - Fish [1] | > 100 mg/l (96 h, Pisces, QSAR, Nominal concentration) |
| EC50 - Crustacea [1] | > 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 72h - Algae [1] | 2.78 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum) |
| EC50 96h - Algae [1] | 9480000 mg/l Source: ECOSAR |
| ErC50 algae | > 3 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |
| NOEC (chronic) | 3.95 mg/l Test organisms (species): Duration: '28 d' |

| Sodium deoxycholate (302-95-4) | |
|---------------------------------------|------------------------------|
| LC50 - Fish [1] | 1592.185 mg/l Source: ECOSAR |
| EC50 96h - Algae [1] | 968.709 mg/l Source: ECOSAR |

12.2. Persistence and degradability

| Harlequin® Chromogenic Agar for Salmonella Esterase (CASE) | |
|---|------------------------|
| Persistence and degradability | Not rapidly degradable |

| Kaolin (1332-58-7) | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable (inorganic) |
| ThOD | Not applicable (inorganic) |

| Oxbile (Oxgall) (8008-63-7) | |
|------------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |

| D-(+)-Cellobiose (528-50-7) | |
|------------------------------------|---|
| Persistence and degradability | Biodegradability in water: no data available. |

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| Sodium pyruvate (113-24-6) | |
|-------------------------------|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |

| Sodium deoxycholate (302-95-4) | |
|--------------------------------|---|
| Persistence and degradability | Biodegradability in water: no data available. |

12.3. Bioaccumulative potential

| Kaolin (1332-58-7) | |
|---------------------------|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |

| D-(+)-Cellobiose (528-50-7) | |
|---|-------------------------|
| Partition coefficient n-octanol/water (Log Pow) | -5.03 (Estimated value) |
| Bioaccumulative potential | Not bioaccumulative. |

| Sodium pyruvate (113-24-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | -3.8 (Practical experience/observation, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C) |
| Bioaccumulative potential | Not bioaccumulative. |

| Sodium deoxycholate (302-95-4) | |
|---|--|
| Partition coefficient n-octanol/water (Log Pow) | 1.24 (Estimated value) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

12.4. Mobility in soil

| Kaolin (1332-58-7) | |
|--------------------|---|
| Ecology - soil | No (test)data on mobility of the substance available. |

| Sodium pyruvate (113-24-6) | |
|----------------------------|---|
| Surface tension | No data available in the literature |
| Ecology - soil | No (test)data on mobility of the substance available. |

| Sodium deoxycholate (302-95-4) | |
|--------------------------------|---|
| Ecology - soil | No (test)data on mobility of the substance available. |

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

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SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

| DOT | TDG | IMDG | IATA |
|---|---------------|---------------|---------------|
| 14.1. UN number | | | |
| Not regulated for transport | | | |
| 14.2. Proper Shipping Name | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | |

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are exempt or present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

| | | |
|--------|-------------------|----------|
| Kaolin | CAS-No. 1332-58-7 | 15 – 25% |
|--------|-------------------|----------|

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Sodium phosphate dibasic (7558-79-4)

| | |
|-----------|---------|
| CERCLA RQ | 5000 lb |
|-----------|---------|

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Ferric ammonium citrate (1185-57-5)

CERCLA RQ

1000 lb

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 6/9/2025

Issue date : 12/17/2024

Full text of hazard classes and H-statements

| | |
|------|---|
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H401 | Toxic to aquatic life |
| H411 | Toxic to aquatic life with long lasting effects |

Safety Data Sheet (SDS), USA

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.