Harlequin® Chromogenic Agar for Salmonella Esterase (CASE)

Safety Data Sheet

According REACH Regulation 1907/2006 as retained in UK law by UK REACH SI 2019 No. 758 as amended
Issue date: 30/09/2025 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Harlequin® Chromogenic Agar for Salmonella Esterase (CASE)
Product code	:	NCM1006
Type of product	:	Food Safety -- [Food Safety]
Part Number(s)	:	NCM1006|700004800|700004801|700004804

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

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Neogen Corporation
620 Lesher Place
48912 Lansing – Michigan
United States of America
T 800.234.5333
sds@neogen.com - https://www.neogen.com/

1.4. Emergency telephone 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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

No labelling applicable

2.3. Other hazards

Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	Kaolin (1332-58-7), Sodium pyruvate (113-24-6), Ferric ammonium citrate (1185-57-5), Sodium cholate (361-09-1), Sodium deoxycholate (302-95-4)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	Kaolin (1332-58-7), Sodium pyruvate (113-24-6), Ferric ammonium citrate (1185-57-5), Sodium cholate (361-09-1), Sodium deoxycholate (302-95-4)

Results of Endocrine Disruptor assessment

Component	
Substance(s) not considered as endocrine disrupting. They are not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, nor identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	Kaolin(1332-58-7), Sodium cholate(361-09-1), Sodium deoxycholate(302-95-4), Sodium pyruvate(113-24-6), Ferric ammonium citrate(1185-57-5)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
Kaolin substance with workplace exposure limit(s)	CAS-No.: 1332-58-7 EC-No.: 310-194-1	15 – 25	Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.5 mg/l/4h)
Sodium cholate	CAS-No.: 361-09-1 EC-No.: 206-643-5	1 – 5	Aquatic Chronic 3, H412
Sodium deoxycholate	CAS-No.: 302-95-4 EC-No.: 206-132-7	1 – 5	Acute Tox. 4 (Oral), H302 (ATE=1370 mg/kg bodyweight)
Sodium pyruvate	CAS-No.: 113-24-6 EC-No.: 204-024-4	1 – 5	Aquatic Chronic 2, H411
Ferric ammonium citrate substance with workplace exposure limit(s)	CAS-No.: 1185-57-5 EC-No.: 214-686-6	1 – 5	Not classified

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

No additional information available

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

No additional information available

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No additional information available

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : 2 – 8 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Kaolin (1332-58-7)	
United Kingdom - Occupational Exposure Limits	
Local name	Kaolin
WEL TWA (OEL TWA)	2 mg/m³ respirable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Ferric ammonium citrate (1185-57-5)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	1 mg/m³
WEL STEL (OEL STEL)	2 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Colour	:	Off-white.
Odour	:	Characteristic.
Odour threshold	:	Not available
pH	:	7.1 – 7.5
pH solution	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flash point	:	Not applicable
Flammability	:	Not available
Explosive limits	:	Not applicable
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Relative vapour density at 20°C	:	Not applicable
Relative density	:	Not available
Density	:	Not available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

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

Sodium pyruvate (113-24-6)	
LD50 oral	3533 mg/kg bodyweight (Mouse, Experimental value, Oral)
LD50 dermal rat	> 3000 mg/kg bodyweight (Rat, Male, Experimental value, Intraperitoneal)

Ferric ammonium citrate (1185-57-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: other:
LD50 dermal rabbit	> 7940 mg/kg Source: ECHA

Sodium cholate (361-09-1)	
LD50 oral	2400 mg/kg bodyweight Animal: mouse

Sodium deoxycholate (302-95-4)	
LD50 oral rat	1370 mg/kg (Rat, Oral)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 7.1 – 7.5

Kaolin (1332-58-7)	
pH	4.5 Source: hsdb

Sodium pyruvate (113-24-6)	
pH	7 (10 %)

Ferric ammonium citrate (1185-57-5)	
pH	6 – 8 Source: ECHA

Sodium cholate (361-09-1)	
pH	8 – 9.5 (5 %)

Sodium deoxycholate (302-95-4)	
pH	7.5 – 9 (2 %)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 7.1 – 7.5

Kaolin (1332-58-7)	
pH	4.5 Source: hsdb

Sodium pyruvate (113-24-6)	
pH	7 (10 %)

Ferric ammonium citrate (1185-57-5)	
pH	6 – 8 Source: ECHA

Sodium cholate (361-09-1)	
pH	8 – 9.5 (5 %)

Sodium deoxycholate (302-95-4)	
pH	7.5 – 9 (2 %)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

Ferric ammonium citrate (1185-57-5)	
NOAEL (animal/male, F0/P)	595.9 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: other:

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

Sodium deoxycholate (302-95-4)	
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Sodium pyruvate (113-24-6)	
Viscosity, kinematic	Not applicable (solid)

Sodium deoxycholate (302-95-4)	
Viscosity, kinematic	Not applicable (solid)

Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

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)

Sodium pyruvate (113-24-6)	
EC50 72h - Algae [1]	2.78 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	94800000 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'

Ferric ammonium citrate (1185-57-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Static system, Fresh water, Experimental value)
LC50 - Fish [2]	> 100 mg/l Test organisms (species): other:
EC50 - Crustacea [1]	275 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): other:
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Static system, Fresh water, Experimental value)

Sodium cholate (361-09-1)	
LC50 - Fish [1]	45356.434 mg/l Source: Ecological Structure Activity Relationships
EC50 - Other aquatic organisms [1]	35.8713 mg/l Test organisms (species):
EC50 72h - Algae [1]	169.7059 mg/l Test organisms (species):
EC50 96h - Algae [1]	22734.682 mg/l Source: Ecological Structure Activity Relationships

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)

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

Ferric ammonium citrate (1185-57-5)	
Persistence and degradability	Readily biodegradable in water.

Sodium cholate (361-09-1)	
Persistence and degradability	Not 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.

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.

Ferric ammonium citrate (1185-57-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.737 (Calculated, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

Sodium cholate (361-09-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.29 (Calculated, KOWWIN)
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.

Ferric ammonium citrate (1185-57-5)	
Ecology - soil	No (test)data on mobility of the substance available.

Sodium cholate (361-09-1)	
Mobility in soil	1140 Source: Quantitative Structure Activity Relation
Ecology - soil	Highly mobile in soil.

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

12.5. Results of PBT and vPvB assessment

Component	
Kaolin (1332-58-7)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
Sodium pyruvate (113-24-6)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
Ferric ammonium citrate (1185-57-5)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
Sodium cholate (361-09-1)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII

Component	
Sodium deoxycholate (302-95-4)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
Transport document description				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not applicable

Rail transport
Not applicable

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. National regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC) above the 0.1% level of disclosure

GB PIC Regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure
This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure
This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure
This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (EC 273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Safety Data Sheet (SDS), UK

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.