

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

1.1. Product identifier

Product form : Mixture
Trade name : R2A Broth
Product code : NCM0188
Type of product : Food Safety -- [Food Safety]
Part Number(s) : NCM0188|700004593

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

Relevant identified uses

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

1.3. Details of the supplier of the safety data sheet

Neogen Corporation
620 Leshar 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 Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|---|----------------------------|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | Sodium pyruvate (113-24-6) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | Sodium pyruvate (113-24-6) |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|-------------|--|
| Starch, soluble (potato) substance with national workplace exposure limit(s) (BE, CZ, ES, FR, GB, GR, IE, PT, CH) | CAS-No.: 9005-25-8 EC-No.: 232-679-6 | ≥ 15 – < 25 | Not classified |
| Sodium pyruvate | CAS-No.: 113-24-6 EC-No.: 204-024-4 | ≥ 5 – < 10 | Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411 |

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

SECTION 4: First aid measures

4.1. Description of 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. |
| First-aid measures after eye contact | : Rinse eyes with water as a precaution. |
| First-aid measures after ingestion | : Call a poison center or a doctor if you feel unwell. |

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

| | |
|-------------------------------------|--|
| Symptoms/effects after inhalation | : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after excessive inhalation exposure. |
| Symptoms/effects after skin contact | : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing. |
| 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 any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

| | |
|--|--------------------------------|
| 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. Advice for firefighters

| | |
|--------------------------------|---|
| 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. |

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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.

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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material 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.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Storage temperature : 2 – 30 °C
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

| Starch, soluble (potato) (9005-25-8) | |
|--|--|
| Ireland - Occupational Exposure Limits | |
| Local name | Starch |
| OEL TWA | 10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust |
| Remark | Advisory OELV (Advisory Occupational Exposure Limit Values) |

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Starch, soluble (potato) (9005-25-8)

Regulatory reference

Chemical Agents Code of Practice 2024

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---------------------|
| Physical state | : Solid |
| Colour | : Beige. |
| Appearance | : Powder. |
| Odour | : Characteristic. |
| Odour threshold | : Not available |
| Melting point | : Not available |
| Freezing point | : Not applicable |
| Boiling point | : Not available |
| Flammability | : Non flammable. |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not available |
| pH | : 7 – 7.4 |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Soluble in water. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |

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| | |
|---------------------------------|------------------|
| Vapour pressure at 50°C | : Not available |
| Density | : Not available |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not applicable |
| Particle size | : Not available |

9.2. Other information

No additional information available

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 hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------------------------|---|
| 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) |

| Starch, soluble (potato) (9005-25-8) | |
|--------------------------------------|--|
| LD50 oral rat | > 2000 mg/kg (Rat, Literature study, Oral) |

| 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) |

| | |
|---------------------------|--|
| Skin corrosion/irritation | : Not classified (Based on available data, the classification criteria are not met) pH: 7 – 7.4 |
|---------------------------|--|

| Starch, soluble (potato) (9005-25-8) | |
|--------------------------------------|---------------|
| pH | 6 – 7.5 (2 %) |

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

| | |
|-------------------------------|--|
| Serious eye damage/irritation | : Not classified (Based on available data, the classification criteria are not met) pH: 7 – 7.4 |
|-------------------------------|--|

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Starch, soluble (potato) (9005-25-8)

| | |
|----|---------------|
| pH | 6 – 7.5 (2 %) |
|----|---------------|

Sodium pyruvate (113-24-6)

| | |
|----|----------|
| pH | 7 (10 %) |
|----|----------|

| | |
|-----------------------------------|---|
| 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) |
| 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) |

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| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

Starch, soluble (potato) (9005-25-8)

| | |
|----------------------|------------------------|
| Viscosity, kinematic | Not applicable (solid) |
|----------------------|------------------------|

Sodium pyruvate (113-24-6)

| | |
|----------------------|------------------------|
| Viscosity, kinematic | Not applicable (solid) |
|----------------------|------------------------|

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| 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) |
| 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' |

12.2. Persistence and degradability

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| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

Starch, soluble (potato) (9005-25-8)

| | |
|-------------------------------|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
|-------------------------------|---------------------------------|

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Starch, soluble (potato) (9005-25-8)

| | |
|------|------------------------------------|
| ThOD | 1.18 g O ₂ /g substance |
|------|------------------------------------|

Sodium pyruvate (113-24-6)

| | |
|-------------------------------|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
|-------------------------------|---------------------------------|

12.3. Bioaccumulative potential

Starch, soluble (potato) (9005-25-8)

| | |
|---------------------------|------------------------------------|
| 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. |

12.4. Mobility in soil

Starch, soluble (potato) (9005-25-8)

| | |
|----------------|---|
| 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. |

12.5. Results of PBT and vPvB assessment

Component

| | |
|---|----------------------------|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | Sodium pyruvate (113-24-6) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | Sodium pyruvate (113-24-6) |

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| 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. |
| HP Code | : HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment |

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SECTION 14: Transport information

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

| ADR | IMDG | IATA | ADN | RID |
|---|---------------|---------------|----------------|----------------|
| 14.1. UN number or ID 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 |
| 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. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

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POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

France

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|---------|---|
| ACGIH | American Conference of Government Industrial Hygienists |
| 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 |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| COD | Chemical oxygen demand (COD) |
| CSA | Chemical safety assessment |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| ED | Endocrine disruptor |
| EN | European Standard |
| EWC | European waste catalogue |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |

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| Abbreviations and acronyms: | |
|-----------------------------|--|
| LOAEL | Lowest Observed Adverse Effect Level |
| Log Kow | Partition coefficient n-octanol/water (Log Kow) |
| Log Pow | Partition coefficient n-octanol/water (Log Pow) |
| MAK | maximum workplace concentration |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| OSHA | Occupational Safety Health Administration |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| PPE | Personal protection equipment |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TF | Technical function |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| TWA | Time Weighted Average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| UFI | Unique Formula Identifier |

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Aquatic Chronic 2 | Hazardous to the aquatic environment – Chronic Hazard, Category 2 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Sens. 1B | Skin sensitisation, category 1B |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H411 | Toxic to aquatic life with long lasting effects. |

Safety Data Sheet (SDS), EU

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.