

# Hesperetin Powder – Natural Isolate up to 98% from Bitter Orange (*Citrus aurantium*)

*Citrus aurantium* · Rutaceae

|                   |                                                         |              |                       |
|-------------------|---------------------------------------------------------|--------------|-----------------------|
| DOCUMENT          | PRODUCT CODE                                            | DOCUMENT NO. | REVISION              |
| Safety Data Sheet | AP0299                                                  | SDS-AP0299   | 1.0 · 24 October 2026 |
| FORMAT            | UN GHS Rev. 10 · US OSHA HCS (2024) · EU REACH Annex II |              |                       |

## 1 Identification of the substance/mixture and of the company

|                      |                                                                                                                                                                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product identifier   | Hesperetin Powder – Natural Isolate up to 98% from Bitter Orange ( <i>Citrus aurantium</i> )                                                                                                                                                |
| Product code         | AP0299                                                                                                                                                                                                                                      |
| Other names          | Bitter orange                                                                                                                                                                                                                               |
| Recommended use      | Raw material for the manufacture of nutraceuticals & supplements, pharmaceutical products. Industrial and professional use only.                                                                                                            |
| Uses advised against | Not for direct use by consumers as supplied. Not for medicinal use unless the user holds the required authorisation.                                                                                                                        |
| Supplier             | CHOLAD PRIVATE LIMITED (trading as Extrakte)<br>C 22/4, 2nd & 3rd Floor, Sector-57, Noida-201301, Uttar Pradesh, India                                                                                                                      |
| Telephone / e-mail   | +91 817 8117 600 · choladco@gmail.com · extrakte.com                                                                                                                                                                                        |
| Emergency telephone  | 24-hour emergency (CHOLAD PRIVATE LIMITED): +91 81781 17600. Medical advice: National Poisons Information Centre, AIIMS New Delhi (24 h): 1800 116 117 (toll-free in India) / +91 11 2658 9391; outside India, your national poison centre. |

## 2 Hazard identification

### 2.1 Classification (UN GHS / EU CLP Regulation (EC) No 1272/2008 / US OSHA HCS 29 CFR 1910.1200, as amended 2024)

Not classified as hazardous according to UN GHS and Regulation (EC) No 1272/2008 (CLP). US OSHA HCS: combustible dust — see 2.3.

### 2.2 Label elements

GHS / CLP: no hazard pictogram, signal word or hazard statement required. US OSHA only: signal word WARNING — May form combustible dust concentrations in air (see 2.3).

### 2.3 Other hazards

- US OSHA (combustible dust):** signal word WARNING — May form combustible dust concentrations in air. Fine powder may cause mechanical irritation of the eyes and respiratory tract.
- PBT / vPvB assessment: not carried out (botanical substance of unknown or variable composition).

**Basis of classification.** Calculated for the product at its highest grade using the GHS mixture rules (additivity formula and generic concentration limits), from the classification of: Hesperetin (PubChem CID 72281; up to 98%): no hazard classification — ECHA C&L Inventory aggregated notifications (codes reported by ≥50% of notifiers).

## 3 Composition / information on ingredients

Enriched extract / natural isolate of *Citrus aurantium* supplied in grades 10%, 40%, 90%, 98%. Lower grades are substances of unknown or variable composition (UVCB); the highest grade approaches a single-constituent substance. Classified on the basis of its constituents at the highest grade.

| COMPONENT                                  | CAS      | CONCENTRATION | CLASSIFICATION (PURE COMPONENT) |
|--------------------------------------------|----------|---------------|---------------------------------|
| Extract of <i>Citrus aurantium</i> (fruit) | —        | to 100%       | Not classified as a whole       |
| Hesperetin                                 | 520-33-2 | ≤ 98%         | Not classified                  |

Concentrations refer to the highest grade offered. Full text of H-statements in section 16.

#### 4 First-aid measures

|                             |                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                  | Move to fresh air and keep at rest. Get medical advice if symptoms such as coughing or breathing difficulty persist.                                          |
| Skin contact                | Remove contaminated clothing immediately. Wash with plenty of soap and water. Get medical advice if irritation or rash develops.                              |
| Eye contact                 | Rinse cautiously with water for at least 15 minutes, holding eyelids open; remove contact lenses if easy to do. Get medical advice if irritation persists.    |
| Ingestion                   | Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Get medical advice if a large amount is swallowed or if you feel unwell. |
| Most important symptoms     | No specific symptoms known; dust may cause mechanical irritation.                                                                                             |
| Immediate medical attention | Not normally required. Treat symptomatically.                                                                                                                 |

#### 5 Fire-fighting measures

|                                |                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media   | Water spray, alcohol-resistant foam, dry chemical powder, carbon dioxide.                                                                                                     |
| Unsuitable extinguishing media | High-volume water jet (may disperse dust and create an explosive dust cloud).                                                                                                 |
| Specific hazards               | Fine dust dispersed in air in sufficient concentration may form an explosive mixture with an ignition source. Hazardous combustion products: carbon monoxide, carbon dioxide. |
| Advice for firefighters        | Wear self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water spray.                                                       |

#### 6 Accidental release measures

|                           |                                                                                                                                                                                                                        |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions      | Use the personal protective equipment in section 8. Avoid raising dust. Ensure adequate ventilation.                                                                                                                   |
| Environmental precautions | Prevent large quantities entering drains or watercourses.                                                                                                                                                              |
| Methods for clean-up      | Collect mechanically (sweep gently or use a vacuum cleaner fitted with a HEPA filter); avoid dry sweeping that creates dust. Place in labelled, closed containers for disposal (section 13). Wash the area with water. |

#### 7 Handling and storage

##### Precautions for safe handling

- Avoid contact with skin and eyes and inhalation of dust or mists.
- Use with local exhaust ventilation at points where dust or vapour may be generated.
- Do not eat, drink or smoke in work areas; wash hands after handling.
- Prevent dust accumulation; ground and bond equipment when handling large quantities to avoid electrostatic discharge.

### Conditions for safe storage

- Store in a cool (below 25 °C), dry place, protected from light.
- Hygroscopic: reseal immediately after use and minimise exposure to humid air.
- Keep away from strong oxidising agents.

## 8 Exposure controls / personal protection

### Control parameters

|                                             |                                                                                                                                                  |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                                     | No occupational exposure limits established.                                                                                                     |
| Dust (particulates not otherwise specified) | ACGIH TLV: 10 mg/m <sup>3</sup> inhalable, 3 mg/m <sup>3</sup> respirable · OSHA PEL: 15 mg/m <sup>3</sup> total, 5 mg/m <sup>3</sup> respirable |

### Exposure controls

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Engineering controls | Local exhaust ventilation; general ventilation for small quantities.          |
| Eye / face           | Safety glasses with side shields (EN 166 / ANSI Z87.1).                       |
| Hands                | Nitrile rubber gloves, ≥ 0.11 mm (EN ISO 374); change when contaminated.      |
| Body                 | Laboratory coat or protective work clothing.                                  |
| Respiratory          | P2 / N95 particulate respirator where dust may be generated.                  |
| Hygiene              | Wash hands before breaks and at the end of work. Keep work clothing separate. |

## 9 Physical and chemical properties

|                                       |                                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------|
| Physical state                        | Solid (powder)                                                                                    |
| Colour / appearance                   | Off-white to light yellow powder; higher grades crystalline                                       |
| Odour                                 | Characteristic                                                                                    |
| Odour threshold                       | No data available                                                                                 |
| Melting point / range                 | Not applicable                                                                                    |
| Boiling point / range                 | No data available                                                                                 |
| Flammability                          | Combustible solid; may form explosive dust-air mixtures                                           |
| Lower / upper explosion limit         | No data available                                                                                 |
| Flash point                           | Not applicable (solid)                                                                            |
| Auto-ignition temperature             | No data available                                                                                 |
| Decomposition temperature             | No data available                                                                                 |
| pH                                    | Not determined (aqueous dispersion typically 4–7)                                                 |
| Kinematic viscosity                   | Not applicable                                                                                    |
| Solubility                            | Partially soluble to dispersible in water; soluble in hydro-alcoholic solutions (grade-dependent) |
| Partition coefficient n-octanol/water | No data available                                                                                 |
| Vapour pressure                       | Negligible                                                                                        |
| Density                               | Bulk density typically 0.40–0.70 g/mL                                                             |

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Particle characteristics | Typically $\geq 95\% < 180 \mu\text{m}$ (80 mesh) |
|--------------------------|---------------------------------------------------|

## 10 Stability and reactivity

|                                    |                                                              |
|------------------------------------|--------------------------------------------------------------|
| Reactivity                         | No dangerous reactions known under normal conditions of use. |
| Chemical stability                 | Stable under the recommended storage conditions.             |
| Possibility of hazardous reactions | Dust explosion if dispersed in air near an ignition source.  |
| Conditions to avoid                | Heat, direct sunlight, moisture, dust formation.             |
| Incompatible materials             | Strong oxidising agents.                                     |
| Hazardous decomposition products   | See section 5.                                               |

## 11 Toxicological information

|                                   |                                                                   |
|-----------------------------------|-------------------------------------------------------------------|
| Acute toxicity                    | Based on available data, the classification criteria are not met. |
| Skin corrosion / irritation       | Based on available data, the classification criteria are not met. |
| Serious eye damage / irritation   | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity            | Based on available data, the classification criteria are not met. |
| Carcinogenicity                   | Based on available data, the classification criteria are not met. |
| Reproductive toxicity             | Based on available data, the classification criteria are not met. |
| STOT – single exposure            | Based on available data, the classification criteria are not met. |
| STOT – repeated exposure          | Based on available data, the classification criteria are not met. |
| Aspiration hazard                 | Based on available data, the classification criteria are not met. |

### Information on constituents

- Hesperetin (C<sub>16</sub>H<sub>14</sub>O<sub>6</sub>, CAS 520-33-2, PubChem CID 72281): reported classification none – ECHA C&L Inventory aggregated notifications (codes reported by  $\geq 50\%$  of notifiers).

## 12 Ecological information

|                               |                                                                            |
|-------------------------------|----------------------------------------------------------------------------|
| Toxicity                      | No data available. Not classified as hazardous to the aquatic environment. |
| Persistence and degradability | Botanical material; expected to be biodegradable.                          |
| Bioaccumulative potential     | No data available.                                                         |
| Mobility in soil              | No data available.                                                         |
| PBT / vPvB                    | Not assessed.                                                              |
| Other adverse effects         | Avoid release to the environment in large quantities.                      |

## 13 Disposal considerations

|         |                                                                                                                                                                                                                          |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product | Dispose of via a licensed waste contractor in accordance with local, regional and national regulations. Small quantities of non-hazardous material may be disposed of as non-hazardous industrial waste where permitted. |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                 |                                                                                    |
|-----------------|------------------------------------------------------------------------------------|
| Packaging       | Empty containers completely; recycle or dispose of in the same way as the product. |
| Sewage disposal | Do not discharge to drains.                                                        |

#### 14 Transport information

|                      |                                                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Classification       | Not regulated as dangerous goods for transport (ADR/RID, IMDG Code, IATA DGR, US DOT).                                                  |
| Environmental hazard | No                                                                                                                                      |
| Note                 | Based on the calculated classification of the product. Bulk shipments of combustible powders should be protected from ignition sources. |

#### 15 Regulatory information

- EU REACH: botanical extract (UVCB substance). The EU importer must confirm the registration or exemption status for the import route.
- US TSCA: inventory status not determined; the importer must confirm before import for non-exempt uses (food, supplement, cosmetic and drug uses are outside TSCA).
- Chemical safety assessment: not carried out.

#### 16 Other information

|                  |                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------|
| Revision         | 1.0 – first issue, 24 October 2026                                                                                         |
| Prepared by      | CHOLAD PRIVATE LIMITED (Extrakte) – choladco@gmail.com                                                                     |
| Key data sources | PubChem (NIH) GHS classification summaries of the ECHA C&L Inventory and EU CLP Annex VI; supplier product specifications. |
| Training advice  | Handle only after reading this SDS. Users should be trained in the handling of fine powders and chemical raw materials.    |

Abbreviations: ACGIH – American Conference of Governmental Industrial Hygienists; ATE – acute toxicity estimate; CID – PubChem compound identifier; CLP – Regulation (EC) No 1272/2008; GHS – Globally Harmonized System; OSHA – US Occupational Safety and Health Administration; PEL – permissible exposure limit; STOT – specific target organ toxicity; TLV – threshold limit value.

This Safety Data Sheet was prepared by CHOLAD PRIVATE LIMITED (trading as Extrakte) on the basis of the product's composition and published classification data for its marker constituents (PubChem GHS summaries of ECHA C&L Inventory notifications and EU CLP Annex VI harmonised entries). It describes the product as supplied, for professional and industrial users, and does not replace the user's own risk assessment. The information is believed to be correct at the date of issue but is given without warranty. Certificates of Analysis are issued per lot and are available on request.