upsalite®

(cosmetic grade C101)

Technical Data Sheet

1. General information

1.1. Manufacturer/supplier

Disruptive Materials AB
Uppsala Science Park,
Dag Hammarskjölds väg 54B
SE-751 83 Uppsala, Sweden
info@disruptivematerials.com
www.disruptivematerials.com

1.2. Product DescriptionTrade name

Upsalite® (cosmetic grade C101)

1.2.1. Raw material category

Mattifying agent, Anti-caking, Texture modifier, Rheology modifier, Absorbent

1.2.2. INCI Name

Magnesium Carbonate

1.2.3. Composition

Components	Source	Ratio	Material characterization
Amorphous Mesoporous Magnesium Carbonate	Chemical synthesis	100%	≥ 97 % Amorphous Mesoporous Magnesium Carbonate (EC Nr: 949-380-8)

2. Information on production process

General description of production process:

The material is synthesized by pressurizing a methanol suspension of MgO(s) with CO2(g) followed by extensive drying to remove organic solvents and generate a dry powder.

The product is not irradiated.

3. Geographic origin of raw material

Raw material	Source	Country of origin
MgO	MgO is produced using (derived from) natural $MgCl_2$ from sea water or brine.	Asia
CO_2	Purifying chemical process streams (mostly out of fertilizer production) CO_2 out of fossil sources (gas chambers under earth, used as carbonic acid for drinks and food production	Germany

4. Impurities and contaminants

Compound	Level (mg/kg)	Method
Heavy metals:	Antimony (Sb) ≤ 0.5	ICP-MS
	Arsenic (As) ≤ 0.5	ICP-MS
	Lead (Pb) ≤ 0.5	ICP-MS
	Cobalt (Co) ≤ 3.0	ICP-MS
	Chromium (Cr) ≤ 10.0	ICP-MS
	Nickel (Ni) ≤ 5.0	ICP-MS
	Cadmium (Cd) ≤ 0.1	ICP-MS
	Mercury (Hg) ≤ 0.1	ICP-MS
Volatile organic compound (VOC)	< 3 % (methanol)*	GC-MS

*Methanol is a residue from the synthesis process thus, the presence in the material is non-intended and technically unavoidable.

5. Statements and compliance

5.1. COSMOS certification

Upsalite® (Cosmetic Grade C101) is a raw material verified by ECOCERT GREENLIFE, compliant with the COSMOS Standard and without animal origin (F363(COS)v09, Issued: 09/03/2021).

5.2. Animal testing

No animal tests have been conducted or commissioned, in full compliance with the European Cosmetics Regulation (EC) N° 1223/2009, on the raw material Upsalite, nor on any cosmetic prototype containing Upsalite, or on any other ingredients contained in finished cosmetic products or prototypes containing Upsalite, developed by Disruptive Materials.

5.3. GMO status

Upsalite is produced in the strictest absence of any animal derived material of any type. The item does not contain ingredients that might have been derived from GM sources. Neither proteins nor DNA are present. Consequently, the product will be PCR negative when tested.

5.4. Vegan compliance

Upsalite is a material containing no products, bi-products or derivates with animal origin. It is therefore considered to be compliant to be used in "Vegan" products.

5.5. Allergens

Upsalite does not contain any of the fragrance allergens regulated in Annex III of the regulation EC 1223/2009.

None of the listed fragrance allergens have been intentionally added to the raw materials or are added or formed during the manufacturing process according to our knowledge of the chemistry.

6. Microbiological status

Microorganism	Result (CFU*/g)
Aerobic bacteria	<10
Moulds	<10
Yeasts	<10
Total Aerobic Microbial Count (TAMC)	<10
Total Combined Yeasts and Moulds Count (TYMC)	<10

* Colony forming unit

7. Nanomaterial status

Upsalite is not classified as a nanomaterial according to the definition set in Commission Recommendation of 18 October 2011 on the definition of nanomaterial (2011/696/EU) determined by a Tier 2 (confirmatory) analytical method, as stated in 2011/696/EU.

As Upsalite is not a nanomaterial the French Decree 2012-232, February 2012 on the annual declaration on substances at nanoscale in application of article R. 523-4 of the Environment code does not apply.

8. Shelf life / storage conditions

Upsalite is a hygroscopic material and adsorbs moisture from the atmosphere. Prompt, airtight closing of the packaging after usage is therefore important. Shelf-life is >24 months when stored in a dry environment, below 25°C (unopened original packaging).

9. Customs tariff number

28369911 (Magnesium carbonate)

10. Regulatory Status

10.1. Europe

Components	REACH status	CAS No	EINECS / EC NO.
Amorphous Mesoporous Magnesium Carbonate	01-2120819291-60-0000	NA	949-380-8

10.2. Other countries

Country		Yes/no
Australia	AICS	no
China	IECSC	Yes (Magnesium carbonate)
Canada	DSL NDSL	no
Taiwan	TCSI	no

In the following countries the relevant authorities currently do not require pre-market approval for cosmetic raw materials: Brazil, Japan, South Korea, Philippines, USA

10.3. United States of America

Upsalite is a verified compliant raw material for use in cosmetic products in USA.

10.3.1. Proposition 65

Upsalite is compliant with The Safe Drinking Water and Toxic Enforcement Act of 1986, codified at Health and Safety Code section 25249.5 et seq. Proposition 65.

10.3.2. Mineral hydrocarbons

Upsalite does not contain any mineral hydrocarbons/white mineral oil and is compliant with FDA CFR172.886 Compliance for Mineral Hydrocarbons.

11. Toxicology and Ecotoxicology

11.1. Local toxicity data

Upsalite shows no toxicity for human dermal fibroblasts cells up to a concentration of 1000 µm/ml and 48 h exposure (internal results*).

The viability of Reconstructed human epidermal model is > 50%, according to results obtained from In Vitro EpiDermTM Skin Irritation Test (EPI-200-SIT). Thus, Upsalite is classified as: NI (Not Irritant)/not required classification (external results*).

Upsalite is classified as "non-irritant" when tested in a single use patch test on 20 volunteers, applied as 100% under occlusive conditions (external results*).

A human repeated insult patch test (HRIPT) on 50 volunteers showed no dermal sensitization potential of 100% Upsalite applied topically on the skin. None (0%) of the 50 volunteers exhibited a slightly irritant reaction, or noticed any erythema, dryness or edema neither before the first application, during the induction period nor after the challenge phase, according to the scale used for the interpretation of the results (external results*).

A comprehensive toxicological risk assessment from external toxicology expert is available upon request.

* These studies were performed under GLP and GCP at QACS Ltd laboratory, an external, accredited quality assurance laboratory.