

SECTION 1. IDENTIFICATION

Product identifier

Trade name : PURAC® Powder MA

Recommended use of the chemical and restrictions on use

Recommended use : Intended for food use

Manufacturer or supplier's details

Company name of supplier : PURAC America Inc.
Address : 8250 Flint Street
Lenexa, KS 66214
USA
Telephone : +18006694092
Telefax : +19138884970
E-mail address of person responsible for the SDS : sds@corbion.com

Emergency telephone number

CHEMTREC: +1 703-741-5970 / 1-800-424-9300 CCN#18135

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**

P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
malic acid	6915-15-7	>= 30 - < 60*
sodium hydrogen malate	58214-38-3	>= 30 - < 60*

*Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	: Call a physician immediately.
If inhaled	: If breathed in, move person into fresh air.
In case of skin contact	: If on skin, rinse well with water.
In case of eye contact	: Rinse immediately with plenty of water and seek medical advice. If easy to do, remove contact lens, if worn.
If swallowed	: Rinse mouth. Do not induce vomiting. Drink water. Call physician immediately.
Most important symptoms and effects, both acute and delayed	: Redness Pain Irritation tearing Causes eye irritation.
Notes to physician	: Treat symptomatically. In case of shortness of breath, give oxygen.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water spray Dry powder Foam Carbon dioxide (CO2)
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: none Exposure to decomposition products may be a hazard to health.
Further information	: Use a water spray to cool fully closed containers. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	: Use personal protective equipment. In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: Should not be released into the environment.
Methods and materials for containment and cleaning up	: Collect as much of the spill as possible with a suitable absorbent material. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. To clean the floor and all objects contaminated by this material, use plenty of water.

SECTION 7. HANDLING AND STORAGE

- | | | |
|--|---|---|
| Advice on safe handling | : | Use only with adequate ventilation.
Avoid inhalation, ingestion and contact with skin and eyes.
Wear personal protective equipment.
Do not breathe mist or vapours.
Do not eat, drink or smoke when using this product.
Wash skin thoroughly after handling. |
| Conditions for safe storage | : | Keep containers tightly closed in a cool, well-ventilated place. |
| Further information on storage stability | : | Keep in a dry place.
Stable under normal conditions. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

- | | | |
|--------------------------|---|--|
| Respiratory protection | : | Suitable respiratory equipment:
Equipment should conform to NIOSH Respirator Standard 42 CFR part 84 |
| Filter type | : | Particulates type |
| Hand protection | : | |
| Material | : | Nitrile rubber |
| Rate of permeability | : | > 480 min |
| Glove thickness | : | 0.5 mm |
| Directive | : | Equipment should conform to ANSI/ISEA 105 |
| Eye protection | : | Wear safety glasses or goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
Equipment should conform to ANSI/ISEA Z87.1 |
| Skin and body protection | : | Long sleeved clothing
Boots |
| Protective measures | : | The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- | | | |
|---------------------|---|---------------------------------|
| Appearance | : | powder |
| Colour | : | white |
| Odour | : | No data available |
| Odour Threshold | : | No data available |
| pH | : | 3 - 4
Concentration: 100 g/l |
| Melting point/range | : | No data available |

Boiling point/boiling range	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Self-ignition	: Not applicable
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapour pressure	: No data available
Relative vapour density	: Not applicable
Relative density	: No data available
Density	: No data available
Bulk density	: No data available
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Oxidizing properties	: Not applicable
Particle size	: No data available
Particle Size Distribution	: No data available
Specific surface area	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature and direct sunlight. Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.
Incompatible materials	: Oxidizing agents Bases Acids Metals
Hazardous decomposition products	: toxic fumes Carbon dioxide (CO ₂) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

malic acid:

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 1.306 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 Dermal (Rabbit): > 20,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

malic acid:

Assessment : No skin irritation
Remarks : slight irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

malic acid:

Assessment : Irritating to eyes.
Remarks : Moderate eye irritation

sodium hydrogen malate:

Result : Eye irritation
Remarks : Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

malic acid:

Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

malic acid:

Genotoxicity in vivo : Result: negative

Carcinogenicity

Not classified based on available information.

Components:

malic acid:

Result : negative

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

malic acid:

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Components:

malic acid:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic : EC50 (Daphnia magna (Water flea)): 240 mg/l

invertebrates

Exposure time: 48 h

Toxicity to algae/aquatic plants

: NOEC (Pseudokirchneriella subcapitata (algae)): > 100 mg/l
Exposure time: 72 h

Persistence and degradability

Components:

malic acid:

Biodegradability

: Result: Readily biodegradable.

Bioaccumulative potential

Components:

malic acid:

Partition coefficient: n-octanol/water

: log Pow: -0.46

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential

: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

: Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging

: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

National Regulations

49 CFR

Not regulated as a dangerous good

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards

: Combustible dust
Serious eye damage or eye irritation

SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM/ Intermediate or Final VOC's (40 CFR 60.489):

malic acid	6915-15-7	>= 50 - < 70 %
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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The components of this product are reported in the following inventories:

TSCA : Product not subject to TSCA

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 09-Aug-2023
Separators: Comma is applied as a thousand separator; Dot is used as a decimal separator; Example 1,234,567.89

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