8170L MICROMAX™ PHOSPHOR PASTE

Version	Revision Date:	SDS Number:	Date of last issue: -
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 8170L MICROMAX™ PHOSPHOR PASTE
Product code : 000000000027047943

Manufacturer or supplier's details

Company : Celanese (Shanghai) International Trading Co., Ltd

Address : 4560 Jinke Road, Zhangjiang, Pudong
Shanghai, China 201210

Telephone : 86-21-38619288

Emergency telephone number : CHEMTREC International phone number: +1-703-527 3887,
+86 532 8388-9090 (China, 24h)

E-mail address : HazCom@celanese.com

Recommended use of the chemical and restrictions on use

Recommended use : For industrial use only.
Paste for electronic industry

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : viscous liquid
Colour : pink
Odour : slight

Combustible liquid. May be harmful if swallowed. Suspected of causing genetic defects.

GHS Classification

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 5

Germ cell mutagenicity : Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H227 Combustible liquid.
H303 May be harmful if swallowed.

H341 Suspected of causing genetic defects.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P312 Call a POISON CENTER/ doctor if you feel unwell.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards

Combustible liquid.

Health hazards

May be harmful if swallowed. Suspected of causing genetic defects.

Environmental hazards

Not classified based on available information.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
1,1,3,3-Tetramethylurea	632-22-4	20 -30
Aluminium hydroxide oxide	24623-77-6	1 -10
Triethyl Phosphate	78-40-0	1 -10

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

If inhaled	:	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
In case of skin contact	:	Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
In case of eye contact	:	Immediately flush eyes for at least 15 minutes. Get medical attention.
If swallowed	:	If swallowed Rinse mouth with water. Call a physician or poison control centre immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Most important symptoms and effects, both acute and delayed	:	May be harmful if swallowed. Suspected of causing genetic defects.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry sand Dry chemical Alcohol-resistant foam
Specific hazards during firefighting	:	Hazardous decomposition products formed under fire conditions. (see also section 10) Avoid breathing decomposition products.
Specific extinguishing methods	:	Evacuate personnel to safe areas. Stop spill/release if it can be done with minimal risk. Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for firefighters	:	Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Clean contaminated floors and objects thoroughly while observing environmental regulations.
Methods and materials for containment and cleaning up	:	Contain spill. Soak up with inert absorbent material. Collect and contain contaminated absorbent and dike material for disposal. Keep in suitable, closed containers for disposal. Ventilate the area. Clean contaminated surface thoroughly.
Prevention of secondary hazards	:	Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Handling

Advice on protection against fire and explosion	:	Avoid formation of dust and aerosols. Keep away from heat and sources of ignition.
Advice on safe handling	:	Avoid inhalation, ingestion and contact with skin and eyes. Use only with adequate ventilation/personal protection. Keep container closed when not in use. Take care to avoid waste and spillage when weighing, loading and mixing the product.
Avoidance of contact	:	Acids Oxidizing agents

Storage

Conditions for safe storage	:	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from sources of ignition - No smoking. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep container closed when not in use. Do not reuse empty container.
Further information on storage stability	:	Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Local exhaust or a laboratory hood should be used when handling the materials.
Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Respiratory protection : Provide adequate ventilation.
No personal respiratory protective equipment normally required.
Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.
Observe respirator use limitations specified by the manufacturer.

Persons performing maintenance or repairs on exhaust system equipment (e.g. ducts) may need to use respirators and protective clothing to prevent exposure to any accumulated residues.

Eye/face protection : Wear safety glasses with side shields.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Lightweight protective clothing
Safety shoes

Hand protection
Material : Impervious gloves

Remarks : Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used,

such as the danger of cuts, abrasion, and the contact time.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Avoid contact with skin, eyes and clothing.
Contaminated work clothing should not be allowed out of the workplace.
Remove contaminated clothing and protective equipment before entering eating areas.
Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	viscous liquid
Colour	:	pink
Odour	:	slight
Flash point	:	80 °C Method: Setaflash closed cup - SCC
Density	:	1.92 g/cm³ (20 °C)
Solubility(ies) Water solubility	:	partly miscible

10. STABILITY AND REACTIVITY

Chemical stability	:	The product is chemically stable under recommended conditions of storage, use and temperature.
Possibility of hazardous reactions	:	No applicable data available.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Acids Oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed. Hazardous thermal decomposition products may include: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Fluorinated compounds Hydrogen fluoride

11. TOXICOLOGICAL INFORMATION

Acute toxicity

May be harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 3,358 mg/kg
Method: Calculation method

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

Components:

1,1,3,3-Tetramethylurea:

Acute oral toxicity : LD50 (Rat): 794 mg/kg
Remarks: central nervous system effects

Acute dermal toxicity : LD50 (Rabbit): 3,160 mg/kg

Aluminium hydroxide oxide:

Acute oral toxicity : LD50 (Rat): > 15,900 mg/kg
Method: OECD Test Guideline 401
Remarks: Information given is based on data obtained from similar substances.

Triethyl Phosphate:

Acute oral toxicity : LD50 (Rat): 1,165 mg/kg
Target Organs: Central nervous system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
Remarks: central nervous system effects

Acute inhalation toxicity : LC50 (Rat): > 8.817 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 20,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Species	:	Rabbit
Assessment	:	No skin irritation
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Remarks	:	Information given is based on data obtained from similar substances. Minimal effects that do not meet the threshold for classification.

Triethyl Phosphate:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	Information given is based on data obtained from similar substances. Minimal effects that do not meet the threshold for classification.

Triethyl Phosphate:

Species	:	Rabbit
Result	:	Eye irritation
Assessment	:	Irritating to eyes.
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
Remarks	:	Information given is based on data obtained from similar

substances.

Species	:	Mouse
Assessment	:	Does not cause respiratory sensitisation.
Result	:	Does not cause respiratory sensitisation.
Remarks	:	Information given is based on data obtained from similar substances.

Triethyl Phosphate:

Species	:	Mouse
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.

Germ cell mutagenicity

Suspected of causing genetic defects.

Components:

Aluminium hydroxide oxide:

Germ cell mutagenicity - Assessment	:	Positive result(s) from in vivo somatic cell mutagenicity tests supported by positive results from in vitro mutagenicity assays or chemical structure activity relationship to known germ cell mutagens, Tests on mammalian cell cultures showed mutagenic effects., Information given is based on data obtained from similar substances.

Triethyl Phosphate:

Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen., Overall weight of evidence indicates that the substance is not carcinogenic., Information given is based on data obtained from similar substances.

Reproductive toxicity

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Reproductive toxicity - Assessment	:	No toxicity to reproduction, Animal testing showed no reproductive toxicity., Information given is based on data obtained from similar substances. Animal testing showed no developmental toxicity., Information

given is based on data obtained from similar substances.

Triethyl Phosphate:

Reproductive toxicity - Assessment	:	No toxicity to reproduction, Animal testing showed no reproductive toxicity. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

STOT - single exposure

Not classified due to lack of data.

Components:

Triethyl Phosphate:

Target Organs	:	Central nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Triethyl Phosphate:

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Aluminium hydroxide oxide:

Species	:	Rat
Application Route	:	Ingestion
Remarks	:	No toxicologically significant effects were found. Information given is based on data obtained from similar substances.

Triethyl Phosphate:

Species	:	Rat
NOAEL	:	1,000 mg/kg
Application Route	:	Oral
Remarks	:	No toxicologically significant effects were found.

Aspiration toxicity

Not classified due to lack of data.

Components:

Aluminium hydroxide oxide:
No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

1,1,3,3-Tetramethylurea:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Toxic effects cannot be excluded

Aluminium hydroxide oxide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 7.4 mg/l Exposure time: 96 h Remarks: Aquatic toxicity is unlikely due to low solubility. Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Aquatic toxicity is unlikely due to low solubility.
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Aquatic toxicity is unlikely due to low solubility.
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 7.1 mg/l Exposure time: 28 d Remarks: Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 1.89 mg/l Exposure time: 28 d Remarks: Information given is based on data obtained from similar substances.

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

Triethyl Phosphate:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 901 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 31.6 mg/l Exposure time: 21 d Method: OECD Test Guideline 211

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

Persistence and degradability

Components:

Aluminium hydroxide oxide:

Biodegradability	:	Remarks: Not applicable

Triethyl Phosphate:

Biodegradability	:	Result: Biodegradable

Bioaccumulative potential

Components:

Triethyl Phosphate:

Partition coefficient: n-octanol/water	:	log Pow: 0.8

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	If recycling is not practicable, dispose of in compliance with local regulations. Do not reuse empty container.Never place unused product down any indoor or out door drain. Contaminated/not cleaned containers should be treated/handled like product waste.Dispose of container properly.Refer to applicable Local, State/Provincial, and

Federal Regulations, as well as industry Standards.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous	:	no

IATA-DGR

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

IMDG-Code

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	no

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

Not applicable for product as supplied.

National Regulations

GB 6944/12268

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Marine pollutant	:	no

JT/T 617

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable

Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous		no

Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

National regulatory information

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals	:	This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.
Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)	:	Not listed
Hazardous Chemicals for Priority Management under SAWS	:	Not listed
Catalogue of Specially Controlled Hazardous Chemicals	:	Not listed
List of Explosive Precursors	:	Not listed

Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals	:	Not listed

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export	:	Not listed

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals	:	Not listed

Regulations on the Administration of Controlled Chemicals

List of Controlled Chemicals	:	Not listed

Regulations of Ozone Depleting Substances Management

List of Controlled Ozone Depleting Substances	:	Not listed
List of Controlled Ozone Depleting Substances Import	:	Not listed

and Export

Environmental Protection Law

List of Priority Controlled Chemicals : Not listed

List of Key Controlled New Pollutants : Not listed

16. OTHER INFORMATION

Revision Date : 2025/05/28

Date format : yyyy/mm/dd

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - 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; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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