

Material Safety Data Sheet

Material: 60011097 CAVAMAX® W8

Version: 1.5 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

Skin contact:

No toxic effects are expected.

Inhalation:

No toxic effects are known.

Ingestion:

No toxic effects are expected.

Additional information on acute health effects:

In animal tests: not sensitizing .

3.3 Further information:**Chronic health effects:**

none known

Medical conditions which may be aggravated by exposure:

unknown

Carcinogens/Reproductive toxins:

There are no carcinogenic ingredients present at or over 0.1% in this material. This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels.

See Section 11 for Toxicological Information, if any.

4 First-aid measures**4.1 General information:**

Get medical attention if irritation occurs or if breathing becomes difficult.

4.2 After inhalation:

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

4.3 After contact with the skin:

If contact with skin, wash skin with plenty of water or with water and soap.

4.4 After contact with the eyes:

If contact with eyes, immediately flush eyes with plenty of water.

4.5 After swallowing:

If swallowed, give victim several glasses of water. Get medical attention if symptoms occur.

5 Fire-fighting measures**5.1 Flammable properties:****Method**

Flash point.....: not applicable

Lower explosion limit (LEL).....: 60 g/m³

Upper explosion limit (UEL).....: not established

Autoignition temperature.....: 450 °C (842 °F)

5.2 Fire and explosion hazards:

Risk of dust explosion. Electrostatic charging is possible. Never use welding or cutting torch on or near any container of this material, even if empty, because an explosion could occur.

5.3 Recommended extinguishing media:

water , carbon dioxide , sand , dry chemical or foam-type extinguishing media .

5.4 Unsuitable extinguishing media:

none known

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Hazardous combustion products: carbon dioxide , carbon monoxide .

5.6 Fire fighting procedures:

Use respiratory protection independent of recirculated air.

6 Accidental release measures**6.1 Precautions:**

Avoid dust formation.

6.2 Containment:

No special measures required. Observe local/state/federal regulations.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

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- 6.3 **Methods for cleaning up:**
Take up mechanically and dispose of according to local/state/federal regulations. Avoid formation of dust and dust deposition. Clean up with plenty of water. Dispose of cleansing water in accordance with local/state/federal regulations.
- 6.4 **Further information:**
Eliminate all sources of ignition.

7 Handling and storage

- 7.1 **Handling**
 - Precautions for safe handling:**
Avoid dust formation.
 - Precautions against fire and explosion:**
Observe the general rules for fire prevention. Avoid dust deposit, remove dust regularly. Take precautionary measures against electrostatic charging. Take precautionary measures against dust explosion.
- 7.2 **Storage**
 - Conditions for storage rooms and vessels:**
Observe precautionary measures against dust explosion.
 - Advice for storage of incompatible materials:**
none known .
 - Further information for storage:**
Keep container tightly closed.

8 Exposure controls and personal protection

- 8.1 **Engineering controls**
 - Ventilation:**
Use only with adequate ventilation.
 - Local exhaust:**
In case of dust formation: yes (to maintain concentration below TLV) .
- 8.2 **Associate substances with specific control parameters such as limit values**
Threshold limit values (TLV):

CAS No.	Material	Type	mg/m ³	ppm	Dust fract.
	Particulates not otherwise classified	OSHA PEL	15.0		Inhalable dust
	Particulates not otherwise classified	OSHA PEL	5.0		Respirable dust
9005-25-8	Starch	OSHA PEL	15.0		Inhalable dust
9005-25-8	Starch	OSHA PEL	5.0		Respirable dust
	Particulates not otherwise classified	ACGIH TWA	10.0		Inhalable dust
	Particulates not otherwise classified	ACGIH TWA	3.0		Respirable dust
9005-25-8	Starch	ACGIH TWA	10.0		

Re Particulates not otherwise classified: The value is for particulate matter containing no asbestos and < 1% crystalline silica (ACGIH) .

- 8.3 **Personal protection equipment (PPE)**
 - Respiratory protection:**
In case of dust formation use a NIOSH approved respirator for: fine dust .
 - Hand protection:**
Recommendation: antistatic protective gloves .
 - Eye protection:**
In case of dust formation: chemical safety goggles .

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Other protective clothing or equipment:

Recommendation in case of dust formation: antistatic clothing and shoes .

8.4 General hygiene and protection measures:

Avoid breathing dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Wash thoroughly after handling.

9 Physical and chemical properties**9.1 Appearance**

Physical state / form.....: solid - powder

Colour.....: white

Odour.....: odourless

9.2 Safety parameters**Method**

Flash point.....: not applicable

Autoignition temperature.....: 450 °C (842 °F)

Lower explosion limit (LEL).....: 60 g/m³

Upper explosion limit (UEL).....: not established

Vapour pressure.....: not applicable

Bulk density.....: approx. 500 kg/m³

Water solubility / miscibility.....: 232 g/l at 25 °C (77 °F)

pH-Value.....: not applicable

Viscosity (dynamic).....: not applicable

9.3 Further information

Median value: 95 µm

disturbed dust

Dust explosion class: 1

Kst value.....: 57 m*bar/sec

Maximum explosion pressure: 8.5 bar

Combustion temperature: 450 °C (842 °F)

Minimum ignition energy: 1290 - 2400 mJ with induction

deposited dust

Combustion figure: 5 at 20 °C (68 °F)

Combustion figure: 5 at 100 °C (212 °F)

10 Stability and reactivity**10.0 General information:**

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

10.1 Conditions to avoid:

none known .

10.2 Materials to avoid:

Reacts with: oxidizing agents .

10.3 Hazardous decomposition products:

If stored and handled in accordance with standard industrial practices and local regulations where applicable: none known .

10.4 Further information:

Hazardous polymerization cannot occur.

11 Toxicological information**11.1 General information:**

Toxicological testing has been conducted with this material.

11.2 Toxicological data:**Acute toxicity (LD50/LC50-values relevant to classification):**

Exposition	Value/value range	Species	Source
oral	> 8000 mg/kg	rat	literature

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Primary irritation:

Exposition	Effect	Species/Testsystem	Source
to eyes	not irritating	rabbit	test report

Reference points for mutagenic (carcinogenic) potential:

Test system	Effect	Source
Bacterial Reverse Mutation Test	not mutagenic	test report
Mammalian Erythrocyte Micronucleus Test	not mutagenic	test report
In vitro Mammalian Chromosomal Aberration Test	not mutagenic	literature

12 Ecological information

12.1 Information on elimination (persistence and degradability)

Biodegradation / further information:

Readily biologically degradable

Further information:

-

12.2 Behaviour in environmental compartments

Further information:

Bioaccumulation improbable.

12.3 Ecotoxicological effects:

No likelihood of damaging effect on water organisms.

Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):

According to present experience, no adverse effects on water purification plants.

12.4 Further ecological information

General information:

Evaluation in analogy to a similar tested product. Only introduce into water purification plants in diluted state. Do not introduce into waters and into soil. No environmental problems expected if handled and treated in accordance with standard industrial practices and local regulations where applicable.

13 Disposal considerations

13.1 Product disposal

Recommendation:

Dispose of according to regulations by incineration in a special waste incinerator. Small quantities may be disposed of in a domestic waste incinerator. Observe local/state/federal regulations.

13.2 Packaging disposal

Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14 Transport information

14.1 US DOT & CANADA TDG SURFACE

Valuation.....: Not Regulated

14.2 Transport by sea IMDG-Code

Valuation.....: Not Regulated

Marine Pollutant.....: no

14.3 Air transport ICAO-TI/IATA-DGR

Valuation.....: Not Regulated

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15 Regulatory information**15.1 U.S. Federal regulations****TSCA inventory status and TSCA information:**

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:

This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:

This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

This product does not present any SARA 311/312 hazards.

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS:

This material does not contain any hazardous air pollutants.

15.2 U.S. State regulations**California Proposition 65 Carcinogens:**

This material does not contain any chemicals known to the state of California to cause cancer.

California Proposition 65 Reproductive Toxins:

This material does not contain any chemicals known to the state of California to cause reproductive effects.

Massachusetts Substance List:

9005-25-8 Starch

New Jersey Right-to-Know Hazardous Substance List:

This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List:

9005-25-8 Starch

15.3 Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Hazard Classes:

None.

DSL Status:

This material or one or more of its components is not listed on the Canadian Domestic Substances List. However, the material or some of its components are listed on the NDSL (Non-Domestic Substances List).

Non-DSL Chemicals:

CAS No.	Chemical	Upper limit wt. %
17465-86-0	Cyclooctaamylose	90.0

Canadian Ingredient Disclosure List:

This material contains no listed components.

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15.4 Other international regulations**EU Risk Phrases:**

R-Phrase	Description
R-	-

EU Safety Phrases:

S-Phrase	Description
S-	-

Details of international registration status

Listed on the following inventories:

IECSC - China
PICCS - Philippines
ENCS - Japan
AICS - Australia
EINECS - Europe

16 Other information**16.1 Additional information:**

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
hPa - Hectopascals
mPa*s - Milli Pascal-seconds
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit

ppm - Parts per Million
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
WHMIS - Canadian Workplace Hazardous Materials Identification System

Flash point determination methods

ASTM D56
ASTM D92, DIN 51376, ISO 2592
ASTM D93, DIN 51758, ISO 2719
ASTM D3278, DIN 55680, ISO 3679
DIN 51755

Common name

Tagliabue (Tag) closed cup
Cleveland open cup
Pensky-Martens closed cup
Setaflash or Rapid closed cup
Abel-Pensky closed cup

16.3 Conversion table:

Pressure: 1 hPa * 0.75 = 1 mm Hg = 1 Torr; 1 bar = 1000 hPa
Viscosity: 1 mPa*s = 1 Centipoise (Cp)