

Material Safety Data Sheet

Material: 60011078 CAVAMAX® W6

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

1 Product and company identification**1.1 Identification of the substance or preparation:**

Commercial product name: CAVAMAX® W6
Product group: Cyclodextrin
Use of substance / preparation: Industrial.
Raw material for: Household products .

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker-Chemie GmbH
Hanns-Seidel-Platz 4
81737 München
Germany

Customer information: WACKER SPECIALTIES
Tel (517) 264-8165, Fax (517) 264-8795
Hours of operation:
Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate Website: www.wacker.com

Emergency telephone no. (24h): (517) 264-8500
Transportation emergency: (800) 424-9300 (CHEMTREC, USA)

This MSDS was prepared by the Product Safety Department of Wacker Chemie GmbH, Germany.

2 Composition/information on ingredients**Chemical characterization (substance):**

CAS No.	Chemical characteristics
10016-20-3	Cyclohexaamylose

Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	10016-20-3	Cyclohexaamylose	60.0	100.0	

Type: HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. *** **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

3 Hazards identification**3.1 Hazards classifications****HMIS® rating (product as packaged):**

Health: 2 Fire: 2 Reactivity: 0 PPE: E

Note: Respiratory protection is only recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels; or in the event of a spill or other emergency response situation. Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: D2B

3.2 Emergency overview and potential hazards**Signal Word:**

WARNING

Physical Hazards:

Nuisance dust.

Material Safety Data Sheet

Material: 60011078 CAVAMAX® W6

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

Acute health effects**Route of entry or possible contact:**

eyes , skin , inhalation (in case of dust formation) , ingestion

Eye contact:

Causes eye irritation.

Skin contact:

No toxic effects are expected.

Inhalation:

No toxic effects are known.

Ingestion:

Not expected in industrial use. No toxic effects are expected.

Additional information on acute health effects:

none

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:**

In cases of sickness seek medical advice (show label if possible).

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. Get medical attention if symptoms occur.

4.4 After contact with the eyes:

If contact with eyes, immediately flush eyes with plenty of water. Get medical attention.

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:**Flash point.....: not applicable
Lower explosion limit (LEL).....: 60 g/m³
Upper explosion limit (UEL).....: not established
Autoignition temperature.....: no data at hand**Method****5.2 Fire and explosion hazards:**

The product is a combustible organic dust and under special conditions dust explosion is possible. Electrostatic charging is possible.

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:

At low oxygen level: carbon monoxide .

5.6 Fire fighting procedures:

Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

Material Safety Data Sheet

Material: 60011078 CAVAMAX® W6

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

6 Accidental release measures

- 6.1 Precautions:**
Wear personal protection equipment (see section 8). Avoid dust formation. Avoid contact with eyes and skin. Do not breathe dust.
- 6.2 Containment:**
Cover any spilled material in accordance with regulations to prevent dispersal by wind. Dispose of in prescribed marked containers. 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.
- 6.3 Methods for cleaning up:**
Take up mechanically and dispose of according to local/state/federal regulations. Avoid dust formation. Clean up with plenty of water. Dispose of cleansing water in accordance with local/state/federal regulations.
- 6.4 Further information:**
Consider explosion protection! 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.
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: recommended .
- 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		

Material Safety Data Sheet

Material: 60011078 CAVAMAX® W6

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

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:**

Recommendation in case of dust formation: Use a NIOSH approved respirator for: nuisance dust .

Hand protection:

not necessary

Eye protection:

chemical safety goggles

Other protective clothing or equipment:

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

8.4 General hygiene and protection measures:

Do not get in eyes. Avoid breathing dust/vapor/mist/gas/aerosol. 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.....: no data at hand
Lower explosion limit (LEL).....: 60 g/m³
Upper explosion limit (UEL).....: not established
Bulk density.....: approx. 500 kg/m³
Water solubility / miscibility.....: 145 g/l at 25 °C (77 °F)
pH-Value.....: not applicable
Viscosity (dynamic).....: not applicable

9.3 Further information

Median value: 33 µm
disturbed dust
Dust explosion class: 1
Kst value.....: 173 m*bar/sec
Maximum explosion pressure: 9.9 bar
Combustion temperature: 440 °C (824 °F)
Minimum ignition energy: 60 - 150 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: strong 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.

Material Safety Data Sheet

Material: 60011078

CAVAMAX® W6

Version: 1.6 (US)

Date of print: 24.12.2004

Date of last alteration: 28.07.2002

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	> 10000 mg/kg	rat	literature

Primary irritation:

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

Sensitization:

Exposition	Effect	Test method	Species	Source
to skin	not sensitizing		guinea-pig	test report

Subacute to chronic toxicity:

Species	Test method	End point	Value	Source
rat	Repeated Dose 28-day Oral Toxicity Study in Rodents	NOEL	4000 mg/kg/h/d	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

12 Ecological information**12.1 Information on elimination (persistence and degradability)****Biodegradation / further information:**

Readily biologically degradable

Further information:

No data known.

12.2 Behaviour in environmental compartments**Further information:**

No harmful effects expected.

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

Material Safety Data Sheet

Material: 60011078 CAVAMAX® W6

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

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

14.3 Air transport ICAO-TI/IATA-DGR

Valuation.....: Not Regulated

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:

Immediate (acute) health hazard.

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

Material Safety Data Sheet**Material:** 60011078 **CAVAMAX® W6**

Version: 1.6 (US) Date of print: 24.12.2004 Date of last alteration: 28.07.2002

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:

D2B

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. %
10016-20-3	Cyclohexaamylose	90.0
17465-86-0	Cyclooctaamylose	1.0

Canadian Ingredient Disclosure List:

This material contains no listed components.

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

R-Phrase	Description
R36	Irritating to eyes.

EU Safety Phrases:

S-Phrase	Description
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Details of international registration status

Listed on the following inventories:

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

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.

Material Safety Data Sheet

Material: 60011078 **CAVAMAX® W6****Version:** 1.6 (US) **Date of print:** 24.12.2004 **Date of last alteration:** 28.07.2002

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)