WACKER FINE CHEMICALS

Material Safety Data Sheet

Material: 60007002 **CAVASOL® W7 HP**

Version: 1.3 (US) Date of print: 04/03/2006 Date of last alteration: 11/04/2005

1 Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: CAVASOL® W7 HP
Use of substance / preparation: Industrial.
Raw material for: Household products .
All other areas of application to be agreed with the Application Engineering/ Technical Marketing Department of the manufacturer.

1.2 Company/undertaking identification:

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

Customer information:
WACKER FINE CHEMICALS
Tel (517)264-8165, Fax (517) 264-8795Hours 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 Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

2 Composition/information on ingredients

2.1 Chemical characterization (substance):

CAS No.	Chemical characteristics
128446-35-5	2-Hydroxypropyl cycloheptaamylose

2.2 Information on ingredients:

This material does not contain any hazardous substances at or above OSHA and WHMIS reportable levels.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

3 Hazards identification

3.1 Hazards classifications
HMIS® rating (product as packaged):
Health: 0 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. (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.)

Canadian WHMIS Classification: None.

3.2 Emergency overview and potential hazards
This material is not hazardous under OSHA criteria. This material is not hazardous under WHMIS criteria.

Physical Hazards:
Nuisance dust.

Acute health effects
Route of entry or possible contact:
eyes , skin , inhalation (in case of dust formation)
Eye contact:
Slight irritation by mechanical effects can not be excluded.
Skin contact:
No acute toxic effects are expected.
Inhalation:
No acute toxic effects are expected.
Ingestion:
Not expected in industrial use.
Additional information on acute health effects:
odourless

3.3 Further information:
Chronic health effects:
No known or expected chronic health effects.
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 or SDS if possible).
4.2 After inhalation:
If inhaled, remove to fresh air, keep the victim laying down and restful.
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. Get medical attention if irritation occurs.
4.5 After swallowing:
If swallowed, give victim several glasses of water. If swallowed, induce vomiting. Get medical attention if symptoms occur. Show label if possible.

5 Fire-fighting measures

5.1 Flammable properties: **Method**

Flash point	not applicable
Boiling point / boiling range	not applicable
Lower explosion limit (LEL)	60 g/m³
Upper explosion limit (UEL)	no data at hand
Ignition temperature	420 °C (788 °F)

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:
Hazardous combustion products: carbon dioxide , carbon monoxide and incompletely burnt hydrocarbons .

5.6 Fire fighting procedures:
Fire fighters should wear full protective clothing including a self-contained breathing apparatus. Cool endangered containers with water.

6 Accidental release measures

6.1 Precautions:
Wear personal protection equipment (see section 8). Avoid dust formation. Do not breathe dust.
HAZWOPER PPE Level: D

6.2 Containment:
Cover any spilled material in accordance with regulations to prevent dispersal by wind.
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 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. Minimum ignition energy > 12 mJ and < 25 mJ. Dust may form explosive mixture with air. Avoid formation of dust.

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:
none known .

8 Exposure controls and personal protection

8.1 Engineering controls
Ventilation:
Use with adequate ventilation.
Local exhaust:
yes (to maintain concentration below TLV)

8.2 Associate substances with specific control parameters such as limit values
Maximum airborne concentrations at the workplace:

CAS No.	Material	Type	mg/m³	ppm	Dust fract.
	Particulates not otherwise classified	OSHA PEL	15.0		Inhalable dust
	Particulates not otherwise classified	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

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: rubber gloves .

Eye protection:
Recommendation in case of dust formation: tight fitting 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:
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
Melting point / melting range	120 - 160 °C (248 - 320 °F)	(EU-GL.A.1)
Boiling point / boiling range	not applicable	
Flash point	not applicable	
Ignition temperature	420 °C (788 °F)	
Lower explosion limit (LEL)	60 g/m³	
Upper explosion limit (UEL)	no data at hand	
Vapour pressure	not applicable	
Bulk density	approx. 400 kg/m³	
Water solubility / miscibility	2300 g/l at 24 °C (75 °F)	
pH-Value	not applicable	
Distribut. coeff. n-octanol/water	< 0.000 at 20 °C (68 °F) (Log p_{OW})	(EU-GL.A.8)
Viscosity (dynamic)	not applicable	

9.3 Further information

Median value	approx. 20 µm
disturbed dust	
Dust explosion class	1
Kst value	174 m*bar/sec
Maximum explosion pressure	9.2 bar
Ignition temperature	420 °C (788 °F)
Minimum ignition energy	12 - 26 mJ without induction
Minimum ignition energy	4 - 9 mJ with induction
deposited dust	
Burning behavior	5 at 20 °C (68 °F)
Burning behavior	5 at 100 °C (212 °F)
Glow temperature	> 450 °C (> 842 °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:
Keep away from incompatible substances.

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	> 2243 mg/kg	rat	test report
dermal	> 2000 mg/kg	rat	literature

Primary irritation:

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

Sensitization:

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

Subacute to chronic toxicity:

Species	Test method	End point	Value	Source
rat	Repeated Dose Inhalation Toxicity: 28-day or 14-day Study	NOAEL (spray / dust)	0.01 mg/l/6h/d	test report
rat	Repeated Dose 90-day Oral Toxicity Study in Rodents	NOAEL	4400 mg/kg/d	literature

Reference points for mutagenic (carcinogenic) potential:

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

Experience with man:
-

12 Ecological information

12.1 Information on elimination (persistence and degradability)

Biodegradation:

Method	Degree of elimination	Classification	Source
CO2 Evolution Test/Modified Sturm Test	< 6 %, in 28 day(s)	Not readily biodegradable.	test report

Biodegradation / further information:
-

Hydrolysis:

Method	Classification	Source
Hydrolysis as a function of pH.	Hydrolytic stability.	test report

12.2 Behaviour in environmental compartments

Mobility
-

Further information:
Bioaccumulation is not expected to occur. log POW <= 3.0

12.3 Ecotoxicological effects:

Species	Test method	Exp. time	Result	Source
zebra fish (Brachydanio rerio)	acute	96 h	> 1131 mg/l (LC50)	test report
Daphnia magna	acute	48 h	> 1084 mg/l (EC50)	test report
Selenastrum capricornutum	acute	72 h	> 1182 mg/l (IC50)	test report

No expected damaging effects to aquatic organisms.

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

Test system	Exp. time	Result	Source
sludge	0,5 h	> 100 mg/l (EC50)	test report

According to current knowledge adverse effects on water purification plants are not expected.

12.4 Additional information

Other harmful effects
-

General information:
Prevent material from entering surface waters and 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.

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 by incineration in an approved facility. Observe local/state/federal regulations.

13.2 Packaging diposal
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 for transport

14.2 Transport by sea IMDG-Code
Valuation.....: Not regulated for transport

14.3 Air transport ICAO-TI/IATA-DGR
Valuation.....: Not regulated for transport

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 (Hazardous Air Pollutants):
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:
This material contains no listed components.

New Jersey Right-to-Know Hazardous Substance List:
This material contains no listed components.

Pennsylvania Right-to-Know Hazardous Substance List:
57-55-6 Propylene glycol

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.

Non-DSL Chemicals:

CAS No.	Chemical	Upper limit wt. %
128446-35-5	.beta.-Cyclodextrin, 2-hydroxypropyl ethers	99.0

Canadian Ingredient Disclosure List:
This material contains no listed components.

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
ECL - Korea
AICS - Australia
HSNO - New Zealand

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	**Common name**
ASTM D56	Tagliabue (Tag) closed cup
ASTM D92, DIN 51376, ISO 2592	Cleveland open cup
ASTM D93, DIN 51758, ISO 2719	Pensky-Martens closed cup
ASTM D3278, DIN 55680, ISO 3679	Setaflash or Rapid closed cup
DIN 51755	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)