WACKER SPECIALTIES

Material Safety Data Sheet

Material: 60043412 OmegaDry Cranberry 1 kg

Version: 1.3 (US) Date of print: 24.12.2004 Date of last alteration: 15.09.2003

1 Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: OmegaDry Cranberry 1 kg
Product group: Cyclodextrin Complex
Use of substance / preparation: Industrial.
Food additive

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) 264-8795Hours 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 (preparation):

Chemical characteristics
Cyclooctaamylose cranberry oil complex

2.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	17465-86-0	Cyclooctaamylose	53.9	53.9	
INHA	381718-27-0	Cranberry seed oil	45.0	45.0	

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.

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% 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: 1 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. (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: B4

3.2 Emergency overview and potential hazards

Signal Word:
WARNING
Physical Hazards:
Self-heating material. Flammable/Explosive dust.

Acute health effects
Route of entry or possible contact:
eyes , skin , inhalation (in case of dust formation) , ingestion
Eye contact:
No known eye hazards.
Skin contact:
No acute toxic effects are expected.
Inhalation:
No acute toxic respiratory tract effects are expected.
Mucous membrane contact:
No known mucous membrane hazards.
Ingestion:
No known ingestion hazards.
Addtional information on acute health effects:
Ingestion is not expected during industrial use.

3.3 Further information:

Chronic health effects:
none known
Medical conditions which may be aggravated by exposure:
not established .
Target organs affected:
No known internal organ effects.
Signs and Symptoms of Exposure:
None Expected
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 or other symptoms occur. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

4.2 After inhalation:
If inhaled as dust, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

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 hold eyelids apart and flush with plenty of water for at least 15 min.

4.5 After swallowing:
For ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids.

5 Fire-fighting measures

5.1 Flammable properties: **Method**

Flash point.....: not applicable
Boiling point / boiling range.....: not applicable
Lower explosion limit (LEL).....: not determined
Upper explosion limit (UEL).....: not determined

Autoignition temperature.....: not determined

5.2 Fire and explosion hazards:
Danger of dust explosion with dry product. Electrostatic charging is possible.

5.3 Recommended extinguishing media:
water-spray , carbon dioxide, dry chemical or foam-type extinguishing media .

5.4 Unsuitable extinguishing media:
sharp water jet .

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:
carbon monoxide , carbon dioxide , Heavy soot formation during combustion.

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. Ensure adequate ventilation.
HAZWOPER PPE Level: D

6.2 Containment:
Cover any spilled material in accordance with regulations to prevent dispersal by wind. Prevent material from entering sewers or surface waters. 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:
Ensure adequate ventilation. Avoid formation of dust and dust deposition. Do not use compressed air, dry sweeping or other dust producing methods when cleaning up powdered materials. Use a HEPA filter equipped vacuum or wet sweeping methods to limit dust formation during clean up of powdered materials. Take up mechanically and dispose of according to local/state/federal regulations.

6.4 Further information:
Eliminate all sources of ignition.

7 Handling and storage

7.1 Handling
Precautions for safe handling:
Use care when handling and dispensing powdered materials to avoid generating airborne dust. Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation. Avoid breathing dust/vapor/mist/gas/aerosol. Wash thoroughly after handling.
Precautions against fire and explosion:
Danger of dust explosion with dry product. During transfusion electrostatic charging possible. Take precautionary measures against dust explosion. Keep away from open flames, heat and sparks. Avoid dust deposit, remove dust regularly.

7.2 Storage
Conditions for storage rooms and vessels:
Observe precautionary measures against dust explosion. Store under protective gas. Protect against light.
Advice for storage of incompatible materials:
Self-heating material. Do not store together with fire-promoting and spontaneously inflammable substances or with highly inflammable solids. Do not store together with combustible substances.
Further information for storage:
Store in a dry and cool place. Keep away from sources of heat. Protect against sun. Protect against moisture. Store in original container only. Protect from effects of air / oxygen (peroxide formation).

8 Exposure controls and personal protection

8.1 Engineering controls

Ventilation:

Use with adequate ventilation.

Local exhaust:

In case of dust formation: Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

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:

Recommendation in case of dust formation: A NIOSH approved particulate respirator with a P95 or higher rating.

Hand protection:

Any liquid-tight rubber or vinyl gloves.

Eye protection:

Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:

Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

8.4 General hygiene and protection measures:

Avoid breathing dust/vapor/mist/gas/aerosol. Avoid contact with eyes, skin and clothing. 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.....: Off-white
Odour.....: weak

9.2 Safety parameters **Method**

Melting point / melting range.....: not applicable
Boiling point / boiling range.....: not applicable
Flash point.....: not applicable
Autoignition temperature.....: not determined
Lower explosion limit (LEL).....: not determined
Upper explosion limit (UEL).....: not determined
Vapour pressure.....: not determined
Bulk density.....: approx. 300 - 500 kg/m³
Water solubility / miscibility.....: virtually insoluble
pH-Value.....: not applicable
Distribut. coeff. n-octanol/water....: not applicable
Viscosity (dynamic).....: not applicable

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:
high temperatures , direct sunlight .

10.2 Materials to avoid:
oxidizing agents . Reacts slowly with oxygen or air under formation of peroxides.

10.3 Hazardous decomposition products:
Tendency to form peroxide.

10.4 Further information:
Hazardous polymerization cannot occur.

11 Toxicological information

11.1 General information:
Toxicological testing has not 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

Primary irritation:

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

Reference points for mutagenic (carcinogenic) potential:

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

12 Ecological information

12.1 Information on elimination (persistence and degradability)

Biodegradation / further information:
Evaluation in analogy to a tested product: Readily biologically degradable.

Further information:
-

12.2 Behaviour in environmental compartments
Further information:
Bioaccumulation is not expected to occur. log POW <= 3.0

12.3 Ecotoxicological effects:

Species	Test method	Exp. Time	Result	Source
Daphnia magna	acute	48 h	> 100 mg/l (EC50)	test report

No expected damaging effects to water organisms.

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

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

12.4 Further ecological information

General information:
Prevent material from introduction into surface water 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. Data apply to major components.

13 Disposal considerations

13.1 Product disposal
Recommendation:
Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations. Material designated for disposal should be segregated from any substances or materials specified in Sect. 10 "Stability and reactivity". Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations. State and local regulations may be more stringent than Federal regulations.

13.2 Packaging diposal
Recommendation:
After emptying contaminated containers may be cleansed and recycled. Uncleaned packaging should be treated with the same precautions as the material.

14 Transport information

14.1 US DOT & CANADA TDG SURFACE

Valuation	Hazardous product
Proper Shipping Name	Self-heating solid, organic, n.o.s.
Technical name	(Cyclooctaamylose/cranberry seed oil complex)
Class	4.2
UN no.	3088
Packaging Group	II
Label	**TL:substance liable to spontaneous combustion/4
NAERG Page	135

14.2 Transport by sea IMDG-Code

Valuation	Hazardous product
Class	4.2
Packaging Group	II
UN no.	3088
Proper Shipping Name	Self-heating solid, organic, n.o.s.
Technical name	(Cyclooctaamylose/cranberry seed oil complex)
EmS No.	4.2-04
Marine Pollutant	no

14.3 Air transport ICAO-TI/IATA-DGR

Valuation	Hazardous product
Class	4.2
UN no.	3088
Proper Shipping Name	Self-heating solid, organic, n.o.s.
Technical name	(Cyclooctaamylose/cranberry seed oil complex)
Packaging Group	II

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:
Fire 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:
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:
This material contains no listed components.

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:
B4

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. %
17465-86-0	Cyclooctaamylose	53.9

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

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)