

ACEM 365-is  
(BinOptics, Cristina Staganow, MAY-18-01).

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Shin-Etsu MicroSi, Inc.  
Part No. CEM 365iS



## MATERIAL SAFETY DATA SHEET

This MSDS is compatible with ISO 11014 - 1:1994 and conforms to ANSI standard Z400.1 - 1993.

### Section 1: Chemical Product and Company Identification

#### CHEMICAL SUPPLIER COMPANY NAME

Shin-Etsu MicroSi, Inc.  
10028 South 51<sup>st</sup> Street  
Phoenix, AZ 85044

#### EMERGENCY TELEPHONE

Chemtrec 24 hrs, USA: (800) 424-9300  
Information: (480) 893-8898  
Fax: (480) 893-8637

#### MANUFACTURER'S NAME:

Shin-Etsu MicroSi.

#### ADDRESS:

10028 S. 51<sup>st</sup> Street Phoenix, Arizona 85044

#### TELEPHONE NUMBER:

(480)893-8898

#### DATE PREPARED:

8/17/1998

#### REVIEWED:

10/22/1998

#### PRODUCT NAMES:

**ACEM 365iS**

#### CHEMICAL NAME:

Aqueous Contrast Enhancement Material

#### CHEMICAL FAMILY:

Organic mixture in H<sub>2</sub>O

#### FORMULA:

Mixture in H<sub>2</sub>O

### Section 2: Composition, Information on Ingredients

PRODUCT COMPOSITION	wt.%	ACGIH TLV	OSHA PEL	UNITS	CAS NO.
Water	90	Not Established	Not Established	ppm	7732-18-5
Luviskol VA-64	5-10	Not Established	Not Established	NA	25086-89-9
1-4 diazabicyclo(2,2,2)octane	1-2	Not Established	Not Established	NA	280-57-9
Nitron	2-4	Not Established	Not Established	NA	LVE-94-308

### Section 3: Hazards Identification

#### HAZARD CLASSIFICATION:

Non-flammable (based on IMO and DOT)

#### FIRE AND EXPLOSION:

None

#### POTENTIAL HEALTH EFFECTS

##### INHALATION:

No problems are expected.

##### SKIN CONTACT:

May cause mild skin irritation.

##### EYE CONTACT:

Eye irritation may result.

##### INGESTION:

May be harmful if swallowed.

### Section 4: First Aid Measures

#### INHALATION:

No problems are expected.

#### SKIN CONTACT:

Immediately remove contaminated clothing and footwear from affected areas. Rinse affected areas with water for 15 minutes. Wash affected areas with soap and water. Get medical attention.

#### EYE CONTACT:

Immediately flush eyes with plenty of water for at least 15 minutes. If victim is wearing contact lenses, remove the lenses and rinse. Get medical attention immediately.

#### INGESTION:

If swallowed, do not induce vomiting. Give large quantities of milk or water to drink. **Never give anything by mouth to an unconscious person.** Get medical attention immediately.

## Section 5: Fire-fighting Measures

FLASH POINT:	None
FLAMMABLE LIMITS IN AIR (% by vol):	Not applicable
EXTINGUISHING MEDIA:	Foam, Dry Chemical Powder, or Carbon Dioxide
SPECIAL FIREFIGHTING PROCEDURES:	Wear respiratory protection if in a confined area.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None

## Section 6: Accidental Release Measures

### ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Dike or otherwise contain spills and absorb with inert materials such as earth or dry sand. Place in a chemical waste container. Flush residual spill area with water. Clean up as much as possible and place in a suitable container for later disposal. Prevent spills or contaminated rinse water from entering sewers or watercourses.

### DISPOSAL METHOD:

Dispose in accordance with Federal, State and local regulations. Incineration is recommended.

## Section 7: Handling and Storage

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store closed and upright in a cool, dry place. Prevent electro-static charges (e.g. by grounding). Keep away all possible sources of ignition. Do not store with peroxides and oxidizing materials. Use only with adequate ventilation. Do not inhale vapors. Avoid spilling and releasing vapor. Wear proper protective equipment and avoid contact with skin, eyes or clothing. Wash hands and face after handling this material. Keep out of reach of children. Follow all regulations in pertaining to this material in your country.

### INFORMATION ON EMPTIED CONTAINER

Do not reuse this container. It may be hazardous when emptied (explosive or flammable residues). Keep empty container away from heat, sparks, flame, and other possible sources of ignition. Do not puncture or cut this container, and do not weld on or near this container. Dispose of this container according to local, state, and federal laws in your country.

## Section 8: Exposure Controls/Personal Protection

### EXPOSURE GUIDELINES

ACGIH TLV-TWA:	Not Established [Mixture and Components]
ACGIH STEL:	Not Established [Mixture and Components]
OSHA PEL:	Not Established [Mixture and Components]
AIHA WEEL - TWA:	100 ppm [PGMEA]
VENTILATION:	No special precautions required.
SPECIAL VENTILATION CONTROLS:	None required
RESPIRATORY PROTECTION:	None required.
PROTECTIVE GLOVES:	Rubber Gloves
EYE PROTECTION:	Safety Glasses, Chemical Goggles, Faceshield
PROTECTIVE CLOTHING:	Suitable protective clothing to prevent skin contact.
OTHER EQUIPMENT:	Make safety shower, eyewash stations and handwashing equipment available in the work area.
WORK/HYGIENE PRACTICES:	Avoid breathing vapor. Avoid contact with eyes. Wash hands and face after handling.

## Section 9: Physical and Chemical Properties

BOILING POINT:	100°C [Water]
SPECIFIC GRAVITY(@25 °C):	1.0 [Water]
MELTING POINT:	Not applicable
EVAPORATION RATE:	>1
SOLUBILITY IN WATER:	Soluble
APPEARANCE - COLOR:	Transparent, Colorless
PHYSICAL STATE:	Liquid
ODOR:	None

## Section 10: Stability and Reactivity

STABILITY:	Stable.
CONDITIONS TO AVOID:	None known
INCOMPATIBILITY (MATERIALS TO AVOID):	Oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS:	CO, CO <sub>2</sub> and oxides of nitrogen
HAZARDOUS POLYMERIZATION:	Will not occur

## Section 11: Toxicological Information

No information is available for the mixture. [Mixture]

SKIN IRRITATION:	
SKIN RABBIT:	[1-4 diazabicyclo] Mild reaction
EYE IRRITATION:	
EYE-RABBIT:	[1-4 diazabicyclo] Moderate reaction
ACUTE TOXICITY (LD50):	
LD50 (Oral Rat):	[1-4 diazabicyclo] 1,700 mg. / kg.
LD50 (Oral Rat):	[Luviskol] > 630 mg. / kg.
LD50 (Oral Rabbit):	[1-4 diazabicyclo] 1,100 mg. / kg.
ACUTE TOXICITY (LC50):	No information is available
CHRONIC TOXICITY:	
NTP:	Not listed
IARC:	Not listed
OSHA Regulated:	Not listed
AMES TEST RESULTS:	No information is available
OTHER INFORMATION:	None

## Section 12: Ecological Information

BIODEGRADATION:	No information is available.
BIOACCUMULATION:	No information is available.
AQUATIC TOXICITY:	No information is available.
OTHER INFORMATION:	None

## Section 13: Disposal Considerations

Can be burned in a chemical incinerator equipped with an afterburner and scrubber. Do not dispose of the emptied container unless the contents have been completely removed and the container has been flushed with a clean, neutral solvent and then dried. Do not dispose of the emptied container unlawfully.

## Section 14: Transport Information (per 49 CFR 172.101)

UN NO.:	None
IMO and DOT HAZARD CLASS:	None
DOT LABELS:	None
PLACARD:	None
PACKAGING GROUP:	None
DOT PROPER SHIPPING NAME:	None
EPA HAZARDOUS WASTE CLASS:	None
MARINE POLLUTANT:	None

DOT REPORTABLE QUANTITY (49 CFR 172.101, APP.) and CERCLA REPORTABLE QUANTITY (40 CFR PART 302, TABLE 302.4) HAZARDOUS SUBSTANCE(S) NAME / (CAS NO.), CONTENT(S) AND RQ:

No components in this mixture are listed as DOT or CERCLA Hazardous Substances.

## Section 15: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:

The ingredients in this product are compliant with TSCA regulations and should be used in compliance with TSCA's Low Volume Exemption regulations.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III  
SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS's that are copied and distributed for the material. The toxic chemicals contained in this product are: None

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute. The California proposition 65 chemical(s) contained in this product are: None found.

STATE TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST (State Right-to-Know):

Florida Toxic Substance(s):	None
Massachusetts hazardous substance code(s):	None
Pennsylvania hazardous substance code(s):	None

## Section 16: Other Information

FOR INDUSTRIAL USE ONLY:

This material safety data sheet is offered solely for your information, consideration and investigation. The data described in this MSDS consist of data on literature, our acquisitional data, and analogical inference by data of similar chemical substances or products. Shin-Etsu Chemical Co. Ltd. provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. Final determination of the suitability of any material is the sole responsibility of the user.

ADDITIONAL INFORMATION:

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