

# SAFETY DATA SHEET

## HYPERSPERSE\* MDC704I

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### 1. Identification

**Product identifier** HYPERSPERSE MDC704I  
**Other means of identification** None.  
**Recommended use** Membrane Deposit Control Agent  
**Recommended restrictions** None known.

#### Company/undertaking identification

GE Betz, Inc.  
4636 Somerton Road  
Trevose, PA 19053  
T 215 355 3300, F 215 953 5524

#### Emergency telephone

(800) 877 1940

### 2. Hazard(s) identification

**Physical hazards** Corrosive to metals Category 1  
**Health hazards** Not classified.  
**OSHA defined hazards** Not classified.

#### Label elements



**Signal word** Warning  
**Hazard statement** May be corrosive to metals.  
**Precautionary statement**  
**Prevention** Keep only in original container.  
**Response** Absorb spillage to prevent material damage.  
**Storage** Store in corrosive resistant/ container with a resistant inner liner.  
**Disposal** Dispose of waste and residues in accordance with local authority requirements.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

Components	CAS #	Percent
Disodium phosphonate	13708-85-5	1 - 2.5

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a cool, dry place out of direct sunlight. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation.

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Splash proof chemical goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance**

<b>Color</b>	Colorless
<b>Physical state</b>	Liquid
<b>Odor</b>	Slight amine
<b>Odor threshold</b>	Not available.
<b>pH (concentrated product)</b>	11.1
<b>pH in aqueous solution</b>	11.3 (5% SOL.)
<b>Melting point/freezing point</b>	23 °F (-5 °C)
<b>Initial boiling point and boiling range</b>	215 °F (102 °C)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	< 1 (Ether = 1)
<b>Flammability (solid, gas)</b>	Not applicable.

**Upper/lower flammability or explosive limits**

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.

<b>Vapor pressure</b>	18 mm Hg
<b>Vapor pressure temp.</b>	70 °F (21 °C)
<b>Vapor density</b>	< 1 (Air = 1)
<b>Relative density</b>	1.14
<b>Relative density temperature</b>	70 °F (21 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 %
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Viscosity temperature</b>	70 °F (21 °C)

**Other information**

<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	0 (Estimated)
<b>Pour point</b>	28 °F (-2 °C)
<b>Specific gravity</b>	1.136

## 10. Stability and reactivity

<b>Reactivity</b>	May be corrosive to metals.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials. None under normal conditions.
<b>Incompatible materials</b>	Strong oxidizing agents. Metals.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Prolonged or repeated contact may cause transient irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
HYPERSPERSE MDC704I (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l, 4 Hour, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	This product is not expected to cause respiratory sensitization.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Not listed.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not regulated.	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
Not listed.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. Ecological information****Ecotoxicity**

Product		Species	Test Results
HYPERSPERSE MDC704I (CAS Mixture)	LC50	Fathead Minnow	7040 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	NOEL	Fathead Minnow	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
<b>Aquatic</b> Crustacea	LC50	Daphnia magna	3535 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
	NOEL	Daphnia magna	2500 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
Fish	LC50	Rainbow Trout	6830.2 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	NOEL	Rainbow Trout	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)

**Bioaccumulative potential****Mobility in soil** No data available.**Other adverse effects** Not available.**Persistence and degradability**

Not biodegradable.

- COD (mgO<sub>2</sub>/g) 65 (calculated data)

- TOC (mg C/g) 22 (calculated data)

**13. Disposal considerations**

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

<b>DOT</b>	
<b>UN number</b>	UN3267
<b>UN proper shipping name</b>	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (PHOSPHONIC ACID, [NITRILOTRIS(METHYLENE)]TRIS, SODIUM SALT)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>ERG number</b>	153
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.	

<b>IATA</b>	
<b>UN number</b>	UN3267
<b>UN proper shipping name</b>	Corrosive liquid, basic, organic, n.o.s. (Phosphonic Acid, [Nitrilotris(Methylene)]Tris, Sodium Salt)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8

Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	153
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

UN number	UN3267
UN proper shipping name	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Phosphonic Acid, [Nitrilotris(Methylene)]Tris, Sodium Salt)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

**DOT**



**IATA; IMDG**



**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - No
	Delayed Hazard - No
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**  
Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**  
Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**US state regulations**

**US - Massachusetts RTK - Substance List**  
Not regulated.

**US - Pennsylvania RTK - Hazardous Substances**  
Not regulated.

**US - Rhode Island RTK**  
Not regulated.

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**  
Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**  
Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**  
Not listed.

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**  
Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**  
No ingredient listed.

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**  
No ingredient listed.

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**  
No ingredient listed.

**16. Other information, including date of preparation or last revision**

**Issue date** Feb-11-2016  
**Revision date** Oct-18-2016  
**Version #** 4.0

**List of abbreviations**

IATA: International Air Transport Association  
IMDG: International Maritime Dangerous Goods Code  
CAS: Chemical Abstract Service Registration Number  
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.  
ACGIH: American Conference of Governmental Industrial Hygienists  
TWA: Time Weighted Average  
STEL: Short Term Exposure Limit  
LD50: Lethal Dose, 50%  
LC50: Lethal Concentration, 50%  
NOEL: No Observed Effect Level  
COD: Chemical Oxygen Demand  
BOD: Biochemical Oxygen Demand  
TOC: Total Organic Carbon

**References:**

No data available

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision information**

Physical and chemical properties: Color

**Prepared by**

This SDS has been prepared by GE Water & Process Technologies Regulatory Department (1-215-355-3300).

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