



# Material Safety Data Sheet

Issue Date: 31-OCT-2011  
Supersedes: 29-JUN-2010

CORTROL OS5300

---

## 1 Identification

**Identification of substance or preparation**  
CORTROL OS5300

**Product Application Area**  
Organic oxygen scavenger

**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

Prepared by Product Stewardship Group: T 215-355-3300    Prepared on: 31-OCT-2011

## 2 Hazard(s) identification

\*\*\*\*\*  
**EMERGENCY OVERVIEW**

**WARNING**

May cause slight irritation to the skin. Skin sensitizer. May cause moderate irritation to the eyes. Mists/aerosols may cause irritation to upper respiratory tract.

DOT hazard: Combustible liquid  
Odor: Amine; Appearance: Amber To Brown, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide or foam--Avoid water if possible.

\*\*\*\*\*

**POTENTIAL HEALTH EFFECTS**

**ACUTE SKIN EFFECTS:**

Primary route of exposure; May cause slight irritation to the skin.  
Skin sensitizer.

**ACUTE EYE EFFECTS:**

May cause moderate irritation to the eyes.

**ACUTE RESPIRATORY EFFECTS:**

Mists/aerosols may cause irritation to upper respiratory tract.

**INGESTION EFFECTS:**

May cause gastrointestinal irritation. Very large doses may cause diarrhea, depression, colic and death. May also cause severe allergic reactions in sensitive individuals.

**TARGET ORGANS:**

Prolonged or repeated exposures may cause primary irritant dermatitis, skin sensitization, impaired vision, and/or toxicity to the blood.

**MEDICAL CONDITIONS AGGRAVATED:**

Not known.

**SYMPTOMS OF EXPOSURE:**

Prolonged, repeated exposure may result in brownish discoloration of the conjunctiva and changes in the cornea which may lead to decreased visual acuity.

### 3 Composition / information on ingredients

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

**HAZARDOUS INGREDIENTS:**

Cas#	Chemical Name	Range (w/w%)
3710-84-7	DIETHYLHYDROXYLAMINE Combustible; eye, skin and respiratory tract irritant; may be absorbed by skin	15-40
123-31-9	HYDROQUINONE (1,4-BENZENEDIOL) Toxic (by ingestion); irritant (eyes); potential sensitizer (skin); IARC=3 (carcinogen status not classifiable)	1-5

### 4 First-aid measures

**SKIN CONTACT:**

Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops or persists.

**EYE CONTACT:**

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get immediate medical attention.

**INHALATION:**

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

**INGESTION:**

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician.

Dilute contents of stomach using 2-8 fluid ounces (60-240 mL) of milk or water.

**NOTES TO PHYSICIANS:**

No special instructions

## 5 Fire-fighting measures

**FIRE FIGHTING INSTRUCTIONS:**

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

**EXTINGUISHING MEDIA:**

dry chemical, carbon dioxide or foam--Avoid water if possible.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

oxides of carbon and nitrogen, ammonia and volatile amines

**FLASH POINT:**

131F 55C P-M(CC)

**MISCELLANEOUS:**

Combustible liquid

UN 1993;Emergency Response Guide #128

## 6 Accidental release measures

**PROTECTION AND SPILL CONTAINMENT:**

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Remove ignition sources. Flush area with water. Spread sand/grit.

**DISPOSAL INSTRUCTIONS:**

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

## 7 Handling and storage

**HANDLING:**

Combustible. Do not use around sparks or flames. Bond containers during filling or discharge when performed at temperatures at or above the product flash point.

**STORAGE:**

Keep containers closed when not in use. Protect from freezing. If frozen, thaw and mix completely prior to use. Shelf life 270 days.

## 8 Exposure controls / personal protection

**EXPOSURE LIMITS**

**CHEMICAL NAME**

DIETHYLHYDROXYLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

HYDROQUINONE (1,4-BENZENEDIOL)

PEL (OSHA): 2 MG/M3

TLV (ACGIH): 2 MG/M3

**ENGINEERING CONTROLS:**

Adequate ventilation to maintain air contaminants below exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT:**

Use protective equipment in accordance with 29CFR 1910 Subpart I

**RESPIRATORY PROTECTION:**

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.  
USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.  
If air-purifying respirator use is appropriate, use organic vapor cartridges and any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

**SKIN PROTECTION:**

gauntlet-type butyl or neoprene gloves, chemical resistant apron -- Wash off after each use. Replace as necessary.

**EYE PROTECTION:**

splash proof chemical goggles, face shield

## 9 Physical and chemical properties

Spec. Grav. (70F, 21C)	1.001	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	10	Vapor Density (air=1)	> 1.00
Freeze Point (C)	-12		
Viscosity (cps 70F, 21C)	10	% Solubility (water)	100.0

Odor	Amine
Appearance	Amber To Brown
Physical State	Liquid
Flash Point	P-M(CC) 131F 55C
pH As Is (approx.)	9.8
Evaporation Rate (Ether=1)	< 1.00
Percent VOC:	25.0

NA = not applicable      ND = not determined

## 10 Stability and reactivity

**CHEMICAL STABILITY:**

Stable under normal storage conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS:**

Friction, heat or other sources of ignition may cause a violent reaction releasing heat and toxic fumes. Contact with oxidizers may cause fire or explosion.

**INCOMPATIBILITIES:**

May react with strong oxidizers.

**DECOMPOSITION PRODUCTS:**

oxides of carbon and nitrogen, ammonia and volatile amines

## 11 Toxicological information

Oral LD50 RAT:	>5000 mg/kg
NOTE - Calculated value according to GHS additivity formula	
Dermal LD50 RABBIT:	>5000 mg/kg
NOTE - Calculated value according to GHS additivity formula	

## 12 Ecological information

### AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay  
LC50= 6.1; No Effect Level= 1.6 mg/L  
Fathead Minnow 96 Hour Static Renewal Bioassay  
LC50= 1.4; No Effect Level= .78 mg/L

### BIODEGRADATION

BOD-28 (mg/g): 197  
BOD-5 (mg/g): 23  
COD (mg/g): 706  
TOC (mg/g): 154

## 13 Disposal considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :  
D001=Ignitable.

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

## 14 Transport information

Transportation Hazard: Combustible liquid  
DOT: FLAMMABLE LIQUID N.O.S.(DIETHYLHYDROXYLAMINE)  
3, UN1993, PG III, (HYDROQUINONE) RQ  
DOT EMERGENCY RESPONSE GUIDE #: 128  
Note: Some containers may be DOT exempt, please check BOL for exact container classification  
IATA: FLAMMABLE LIQUIDS, N.O.S.(DIETHYLHYDROXYLAMINE)  
3, UN 1993, PG III  
IMDG: FLAMMABLE LIQUID, N.O.S.(DIETHYLHYDROXYLAMINE)  
3, UN1993, PG III

## 15 Regulatory information

### TSCA:

All components of this product are included on or are in compliance with the U.S. TSCA regulations.

### CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

600 gallons due to HYDROQUINONE (1,4-BENZENEDIOL);

### FOOD AND DRUG ADMINISTRATION:

All ingredients in this product are authorized in 21 CFR176.170 for use in boilers where the steam will be used for manufacturing paper or paperboard.

### NSF Registered and/or meets USDA (according to 1998 Guidelines):

Registration number: Not Registered  
G5, G7

### SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic);Fire

### SARA SECTION 302 CHEMICALS:

CAS# CHEMICAL NAME  
123-31-9 HYDROQUINONE (1,4-BENZENEDIOL)

**SARA SECTION 313 CHEMICALS:**

CAS# CHEMICAL NAME RANGE  
123-31-9 HYDROQUINONE (1,4-BENZENEDIOL) 2.0-5.0%

**CALIFORNIA REGULATORY INFORMATION**

**CALIFORNIA SAFE DRINKING WATER AND TOXIC  
ENFORCEMENT ACT (PROPOSITION 65):**

No regulated constituents present

**MICHIGAN REGULATORY INFORMATION**

CAS# CHEMICAL NAME  
123-31-9 HYDROQUINONE (1,4-BENZENEDIOL)

## 16 Other information

**HMIS vII**

**CODE TRANSLATION**

Health	1	Slight Hazard
Fire	2	Moderate Hazard
Reactivity	0	Minimal Hazard
Special	NONE	No special Hazard
(1) Protective Equipment	D	Goggles,Face Shield,Gloves,Apron

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

**CHANGE LOG**

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
	-----	-----	-----
MSDS status:	05-FEB-1997		** NEW **
	14-MAR-1997	3,5,6,14,16	05-FEB-1997
	18-MAR-1997	15	14-MAR-1997
	01-JUL-1997	15	18-MAR-1997
	19-DEC-1997	7,8	01-JUL-1997
	28-JUL-1998	12	19-DEC-1997
	28-SEP-1999	2	28-JUL-1998
	23-MAR-2000	4,7	28-SEP-1999
	06-JUL-2000	12	23-MAR-2000
	02-OCT-2001	;EDIT:9	06-JUL-2000
	10-DEC-2007	2,4,5,7,8,10	02-OCT-2001
	29-JUN-2010	10	10-DEC-2007
	31-OCT-2011	11	29-JUN-2010