

MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 1

Revision date: 03 September 2010

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Code: B351-3050
Product Name: Atlas CRC-E B351-3050
Company Identification: Schlumberger Technology Corporation
110 Schlumberger Drive
Sugar Land, Texas 77478, USA
Telephone: 1-281-285-7873
Emergency Telephone Number: USA: +1-281-595-3518 (24hr)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Main physical hazards: No classified physical hazards.
Main health hazards: This product may contain small amounts of respirable crystalline silica. CANCER HAZARD. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.
Precautions: Do not breathe dust. Wear suitable protective equipment. Avoid dust formation.
HMIS classification: Health: 0* Flammability: 1 Physical hazard: 0

Form: Granules

Color: Various

Odor: Faint Phenolic

Principle routes of exposure:

Skin contact. Eye contact. Respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Crystalline silica	14808-60-7	60-100
Phenolic resin	9003-35-4	1-5

4. FIRST AID MEASURES

Eye contact: Rinse immediately with plenty of water, also under the eyelids. Seek medical attention if irritation occurs.
Skin contact: Rinse with water.

Ingestion: Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Inhalation: Move to fresh air. Consult a physician if necessary.

5. FIRE-FIGHTING MEASURES

Fire hazard: Negligible. Resin coating combustible.
Flash point: Not applicable.
Autoignition temperature: No data available.
Flammability limits in air:
 Lower: Not applicable
 Upper: Not applicable
Oxidizing properties: No data available

Suitable extinguishing media:
Compatible with all types.

Extinguishing media which must not be used for safety reasons:
None known

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:
Thermal decomposition can lead to release of irritating gases and vapors.

Special protective equipment for firefighters:
Wear protective fire fighting clothing and avoid breathing vapors.

NFPA rating:
 Health: 1
 Flammability: 1
 Instability: 0
 Special: None

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards: No classified physical hazards.
Personal precautions: Do not breathe dust. Wear suitable protective equipment.
Methods for cleaning up: Shovel into suitable container for disposal.
Environmental precautions: Prevent product from entering drains.

7. HANDLING AND STORAGE

Handling:
 Precautions: Do not breathe dust. Wear suitable protective equipment. Avoid dust formation.
 Safe handling advice: Provide appropriate exhaust ventilation at places where dust is formed.
Technical measures/ storage conditions: No special storage conditions required.
Packaging requirements: Paper bag (minimum 3 ply), or other industrial container designed for powders and granulated materials.
Incompatible products: None known.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Control the source. Ensure adequate ventilation.

Hygiene measures: Keep airborne concentrations below exposure limits.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH approved respirator with dust and mist protection (3M 8210). If dust concentration exceeds 5 times the exposure limit, wear an approved HEPA respirator.

Eye protection: It is good practice to wear goggles when handling any chemical.

Hand protection: Cotton gloves.

Skin and body protection: No special precautions required.

Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / C	STEL	Skin	TWA / C	STEL	Final PELs - Skin
Crystalline silica	0.025 mg/m ³	-	-	total dust respirable	-	-
Phenolic resin	-	-	-	-	-	-

Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):

- OSHA PEL's for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m³; total dust 15 mg/m³.
- ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m³, respirable particulate, and 10 mg/m³, inhalable particles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical characterization:	Resin-coated inorganic material.
Fire hazard:	Negligible. Resin coating combustible.
Form:	Granules
Color:	Various
Odor:	Faint Phenolic
Odor threshold:	Not applicable.
pH:	Not applicable.
Boiling point/range:	Not applicable.
Flash point:	Not applicable.
Flammability limits in air:	
Lower:	Not applicable
Upper:	Not applicable
Bulk density:	1100-1600 kg/m ³
Melting point/range:	No data available.
Decomposition temperature:	No data available.
Solubility:	
Water solubility:	Insoluble
Fat solubility:	Insoluble.
Partition coefficient (n-octanol/water):	Not applicable.
Relative density:	~ 2.5 (@ 20°C)
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Viscosity:	Not applicable.
Evaporation rate:	Not applicable.
% Volatile (VOC):	None.

10. STABILITY AND REACTIVITY

Stability:
Stable.

Conditions to avoid:
Keep away from heat, sparks, and flame.

Incompatibility with other substances:
None known.

Hazardous decomposition products:
When heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

Hazardous polymerization:
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**PRODUCT TOXICOLOGICAL INFORMATION****Acute Health Hazard**

Eye contact: May cause mechanical irritation.

Skin contact: No effect expected.
Ingestion: Accidental ingestion of small amounts is not expected to cause adverse effects.
Inhalation: Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. This product may contain small amounts of respirable crystalline silica. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.
Sensitization - lung: None known.
Sensitization - skin: None known.

Chronic Health Hazard

Carcinogenic effects: Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled. Risk of cancer depends on duration and level of exposure.
Mutagenic effects: None known.
Teratogenic effects: None known.
Reproductive toxicity: None known.
Target organ effects: Respiratory system.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Crystalline silica	eyes, respiratory system (in animals: lung cancer)	= 500 mg/kg (Oral LD50; Rat)
Phenolic resin	-	> 2 g/kg (Dermal LD50; Rat) > 5 g/kg (Oral LD50; Rat)

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA Listed Carcinogens	NTP
Crystalline silica	Group 1; Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources)	A2 - Suspected Human Carcinogen	Listed	Listed
Phenolic resin	-	-	-	-

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

COMPONENT INFORMATION

Crystalline silica
Bioaccumulation: Not applicable
Persistence / degradability: Not applicable.
Other information: Listed on PLONOR list of OSPAR

Phenolic resin
Bioaccumulation: Not likely to bioaccumulate because of high molecular weight
Persistence / degradability: Not biodegradable.
Fish toxicity: 96h LC50= >180 mg/l (Scophthalmus maximus juvenile)

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products:**

Dispose of by sanitary landfilling or other acceptable method in accordance with local regulations.

Contaminated packaging:

Send empty bags to sanitary landfill. Render other types of containers unuseable by puncturing or crushing and sanitary landfill unless prohibited by local regulations.

EPA RCRA Hazardous Waste Code:

None

14. TRANSPORT INFORMATION**DOT:**

CERCLA RQ:	None
Hazard class:	Not regulated.
Proper shipping name:	Not regulated
Label(s):	None required.

IMDG/IMO

Shipping name:	Not regulated.
UN number:	None

ICAO/IATA

Shipping name:	Not regulated.
UN number:	None

TDG (Canada):

Shipping name:	Not regulated.
PIN:	None

Note 1:

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

15. REGULATORY INFORMATION**International Chemical Inventories**

USA, Toxic Substances Control Act inventory (TSCA): This product complies with TSCA requirements.

IMPORTS, USA: No import volume restrictions.

Canada, Domestic Substance List (DSL): This product complies with DSL requirements.

IMPORTS, Canada: No import volume restrictions.

U.S.A. Regulations**OSHA Hazard Communication Standard:**

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

EPA RCRA Hazardous Waste Code:

None

EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):

Immediate (Acute) Health Hazard:	None
Delayed (Chronic) Health Hazard:	YES
Fire Hazard:	None
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	None

EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):

This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

Additional Regulatory Information

Crystalline silica

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None

CERCLA/SARA - Hazardous Substances and their RQs: None

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: carcinogen

Phenolic resin

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None

CERCLA/SARA - Hazardous Substances and their RQs: None

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: None

International Hazard Class**WHMIS Hazard Class:**

D2A (Other Toxic Effects - Very Toxic Material)

16. OTHER INFORMATION**Current references:**

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational Safety and Health. Cincinnati, OH.*
5. LOLI Database.

Explanation of terms:

ACGIH:	American Conference of Governmental Industrial Hygienist
ACGIH-TL:	Threshold Limit Value
DSL:	Domestic Substance List
HMIRC:	Hazardous Materials Information Review Commission
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
NIOSH:	National Institute of Occupational Safety & Health
NIOSH-REL:	Recommended Exposure Limit
OSHA:	Occupational Safety & Health Administration
OSHA-PEL:	Permissible Exposure Limit
TSCA:	Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m³]

ACGIH Notations:

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

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End of the Material Safety Data Sheet