


MATERIAL SAFETY DATA SHEET  
INDOPOL H300 DLC<sup>®</sup>-A

Date Revised: November 14, 2011

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Indopol H300 DLC-A  
CHEMICAL NAME: Polybutene on Silicon Dioxide

Company:  NATROCHEM, INC.  
P.O. Box 1205  
Savannah, GA 31402-1205

HMIS RATING	
Health	1
Flammability	1
Reactivity	0

Telephone Numbers:

Transportation Emergencies:

CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)

CHEMTREC (International): (202) 483-7616 (24 hours, call collect)

Product Information: (912) 236-4464 (EST, 8:00AM – 4:00PM M-F)

SECTION 2 - COMPONENTS

INGREDIENT	CAS REGISTRY
Silicon Dioxide	112926-00-8
Polybutene	9003-29-6 (also 9044-17-1)

SECTION 3 - PHYSICAL DATA

Boiling Point: N/DA	Specific Gravity: 1.064
Vapor Pressure (mm Hg): N/DA	Percent Volatiles: N/DA
Vapor Density (Air = 1): N/DA	Evaporation Rate: N/DA
Solubility in Water: Negligible	Odor: characteristic
Appearance: Off-white, free flowing powder	

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): Closed cup: 125 to 165°C (257 to 329°F) (Pensky Martens)  
Open cup: >154°C (>309°F) (Cleveland)

EXTINGUISHING MEDIA: Do not use water jet. Use agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, halogenated agents, foam, steam) or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Do not fight fire when it reaches the material. Withdraw from area and allow the fire to burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion. Where the insulation of tankage and equipment is required, it is recommended that closed-cell foam insulation be used to minimize a potential autoignition hazard. Where open-cell insulation has been contaminated with polybutene, spontaneous combustion may occur at temperatures as low as 138°C (280°F). Therefore, where open cell insulation has been used, the temperature of storage tanks and heat tracing must be kept well below 120°C (250°F) and any insulation contaminated with polybutene should be replaced immediately.

Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

UNUSUAL FIRE & EXPLOSION HAZARDS: Specific hazards arising from the chemical: rapid depolymerization can occur in a fire and produce flammable vapors. May depolymerize at temperatures above 200°C (392°F) with the production of extremely flammable butene monomers.

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#### SECTION 5 - PERMISSIBLE EXPOSURE LIMITS

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Silicon Dioxide: OSHA: 6 mg/m<sup>3</sup> (total dust), 8 hr. TWA; 29 CFR 1910.1000 (rev. 3/1/89). PPG Internal Permissible Exposure Limit (IPEL); Synthetic Precipitated Silicate: 5 mg/m<sup>3</sup> (respirable dust), 8 hr. TWA.

Indopol LC50 Inhalation vapor	Rat	dose 4820	mg/m <sup>3</sup>	4 hours
LC50 Dermal	Rat	dose >10250	mg/m	-
LC50 Oral	Rat	dose >34600	mg/kg	-

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#### SECTION 6 - HEALTH HAZARD DATA

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Keep away from heat, sparks and flame. Keep container closed. Do not breathe vapor or dust. Use only with adequate ventilation. Avoid contact with eyes. Wash thoroughly after handling.

CHRONIC & ACUTE HEALTH EFFECTS: ACUTE; Excessive contact with powder can cause drying of mucous membranes of nose, eyes, and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Eye contact with powder can result in mild irritation. CHRONIC; an epidemiological study was conducted which included 165 precipitated silica workers who had been exposed for an average of 18 years. No adverse effects were noted in complete medical examination (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree or duration of dust exposure. Laboratory studies have also been conducted in small animals via inhalation to levels of precipitated silica dust of up to 126 mg/m<sup>3</sup> for periods from six months to two years. Although precipitated silica was temporarily deposited in the animal's lungs, most of the deposited material was cleared soon after the dust exposure ended. The results of all studies performed by, or known to, PPG indicate a very low order of pulmonary activity for synthetic precipitated silica.

PRIMARY ROUTE OF ENTRY- Inhalation, Ingestion

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No IARC: No OSHA: No

#### EFFECTS OF EXPOSURE-

EYES- May cause slight transient irritation.

SKIN- Prolonged or repeated contact can de-fat the skin and lead to irritation and/or dermatitis.

INHALATION- Inhalation of a similar product for 4 hours at 17 mg/l produced no deaths or untoward behavioral reactions in rats. Exposure to particulates from heated material may cause adverse lung effects if high concentrations are inhaled.

INGESTION- May cause gastrointestinal irritation and diarrhea.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection.

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**SECTION 7 - EMERGENCY & FIRST AID PROCEDURES**

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**EYE CONTACT:** Immediately rinse with clean water for 15 minutes. Retract eyelids often. If irritation persists, seek medical attention.

**SKIN CONTACT:** Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops.

**INHALATION:** If overcome by exposure, remove victim to fresh air. Call a physician immediately.

**INGESTION:** If a large amount is swallowed, get medical attention.

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**SECTION 8 - REACTIVITY DATA**

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**STABILITY:** Stable under recommended storage and handling conditions.

**MATERIALS TO AVOID-** Avoid strong oxidizing agents; acidic clays at >100°C. Avoid alteration of product properties before reuse. Avoid calcining, which may result in crystalline formation. Avoid mixing with additives that may alter toxicological properties.

**CONDITIONS TO AVOID-** Keep away from all sources of ignition, heat, sparks, flame. Avoid strong oxidizing conditions. Avoid extended exposure to temperatures above 60°C in the presence of air. Avoid high temperature treatment (>800°C).

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon and other harmful products.

**HAZARDOUS POLYMERIZATION:** Will not occur. Rapid de-polymerization may occur in a fire and produce flammable vapors. May depolymerize at temperatures above 200°C (392°F) with the production of extremely flammable butene monomers.

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**SECTION 9 - SPILL OR LEAK PROCEDURES**

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** MINIMIZE SPILL AREA. Do not touch or walk through spilled material. Contain and collect spill material and place in suitable container for disposal.

**WASTE DISPOSAL METHOD:** In accordance with local, state, and federal regulations.

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**SECTION 10 - SPECIAL PROTECTION INFORMATION**

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**RESPIRATORY PROTECTION:** Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

**VENTILATION:** Provide explosion proof ventilation as required to control airborne dust levels. The sum total of all ingredients may emit vapors during normal processing. All possible health effects are not known and individual sensitivities will vary. Effective exhaust ventilation should always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation. Ventilation should be adequate to maintain ambient workplace atmosphere below the limits listed in Section 5.

**PROTECTIVE GLOVES:** Impervious gloves to protect against contact with product.

**EYE PROTECTION:** Safety goggles.

**OTHER PROTECTIVE EQUIPMENT:** Protective clothing, eye wash station, safety shower.

## SECTION 11 - SPECIAL PRECAUTIONS

**HANDLING AND STORAGE:** Do not ingest. If ingested, do not induce vomiting. Use only with adequate ventilation. Do not breathe vapor or dust. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations.

Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring. Use explosion-proof electrical/ventilating/lighting/material handling equipment.

**OTHER PRECAUTIONS:** Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse.

## SECTION 12 - ENVIRONMENTAL INFORMATION

**TOXIC SUBSTANCE CONTROL ACT (TSCA):** The components of this product are on the Inventory of the Toxic Substance Control Act.

Ecotoxicity: Not classified as dangerous.

Indopol	result:	EC50>1000 mg/l	Daphnia	48 hours
		LC50> 1000 mg/l	Fish	96 hours

**Conclusion:** Aquatic studies of materials with very low water solubility often refer to the amount of chemical added to the test system, not the amount dissolved in water. Most acute aquatic toxicity studies of these have used the water-accommodated fraction obtained by mixing the test chemical in water for 20 to 24 hours, then siphoning the water for use in the test. The water-soluble fraction is a similar approach. The Indopol materials are not expected to adversely affect microbial activity. Following a modified OECD Method 209, bacterial inhibition using activated sludge microbes was tested with several grades of Indopol. The tests showed no bacterial inhibition at loadings of up to 25 mg/l, measured through oxygen consumption (respiration). In separate tests, the biological oxygen demand of the microorganisms was measured. In these tests, there was no evidence of bacterial toxicity, even at loadings of about 200,000 mg/l. In addition, an epoxidized form of this material was found to be non-mutagenic and non-toxic to the microorganisms used in the Ames mutagenicity assay, *Salmonella typhimurium*.

## CHEMICAL INVENTORIES:

## OSHA:

The component(s) listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

INGREDIENT	ACGIH (TLV)	OSHA (PEL)	UNITS	PERCENTAGE
Silicon Dioxide	10	6	mg/m <sup>3</sup>	~27

## SARA TITLE III INFORMATION:

## SECTION 313 - TOXIC CHEMICALS:

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40 CFR 372.

This information must be included in all MSDSs that are copied and distributed for this material.

SECTION 302 & 304 - EXTREMELY HAZARDOUS SUBSTANCES: This product does not contain an Extremely Hazardous Substance subject to reporting under 40CFR 355.

SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for this product are: Silicon Dioxide - Acute Hazard

CERCLA: This product does not contain any chemical subject to reporting as a CERCLA Hazardous Substance under 40CFR 372.

RCRA: This product is not a hazardous waste as listed in 40CFR 261.33. It does not exhibit any of the hazardous characteristics listed in 40CFR 261 Subpart C.

TRANSPORTATION INFORMATION: Not regulated.

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SECTION 13 - OTHER INFORMATION

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Revision Note: Review and reissue.

Prepared by: Craig Moore

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N/A = Not Applicable N/D = Not determined N/DA = No Data Available N/E = Not established

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