

**NATROCHEM, INC.**Post Office Box 1205  
Savannah, Georgia 31402-1205  
(912) 236-4464**MATERIAL SAFETY  
DATA SHEET****SANTOFLEX 77 DLC®-A**

Date Revised: September 2, 1997

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**SECTION I - PRODUCT IDENTIFICATION**TRADE NAME: Santoflex 77 DLC-A  
CHEMICAL NAME: N,N'-Bis(1,4-dimethylpentyl)-p-phenylenediamine on silicon dioxide

HMIS RATING	
Health	1
Flammability	1
Reactivity	0

**SECTION II - COMPONENTS**

COMPONENT NAME	CAS#
Santoflex 77	3081-14-9
Silicon Dioxide	7531-86-9

**SECTION III - PHYSICAL DATA**

Boiling Point: 184°C @ 1mm Hg	Specific Gravity: 1.07 (calculated)
Vapor Pressure: 0.19 Torr @ 160°C	Percent Volatiles: N/DA
Vapor Density (Air = 1): N/DA	Evaporation Rate: N/DA
Solubility in Water: Slight	
Appearance and Odor: Tan, free flowing powder with aromatic odor.	

**SECTION IV - FIRE & EXPLOSION DATA**FLASH POINT (Method Used): 360°F (COC)  
FLAMMABLE LIMITS: N/A  
AUTOIGNITION TEMPERATURE: N/DA

MARKETED BY  
**HARWICK STANDARD  
DISTRIBUTION CORPORATION**  
60 S. Seiberling Street • Akron, Ohio 44305

EXTINGUISHING MEDIA: Water spray, foam, dry chemical, carbon dioxide or any Class B extinguishing agent.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from the fire area. Firefighters and other emergency responders should wear positive pressure/pressure demand, self-contained breathing apparatus, impervious protective clothing and boots. If possible, move containers from the fire area. High pressure water may spread product from broken containers, increasing contamination or fire hazard. Dike fire waters for later disposal. Do not allow this material to enter storm sewers, watersheds, or waterways. Thoroughly decontaminate all equipment after use.

UNUSUAL FIRE &amp; EXPLOSION HAZARDS: See hazardous decomposition products in Section VII

**SECTION V - HEALTH HAZARD DATA**

CHRONIC HEALTH EFFECTS: 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 animals 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.

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**SECTION V - HEALTH HAZARD DATA (cont)**

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**PRIMARY ROUTE OF ENTRY-** Inhalation.

**CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:** None.

**NTP:** No

**IARC:** No

**OSHA:** No

**EFFECTS OF EXPOSURE-**

**EYES-** Mildly irritating. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

**SKIN-** Mildly irritating. Prolonged or repeated contact may cause allergic reaction in sensitive persons.

**INHALATION-** Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Repeated inhalation may cause blood, lung and liver changes based upon animal data.

**INGESTION-** Moderately toxic if swallowed, based upon animal data.

**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 VI - EMERGENCY & FIRST AID PROCEDURES**

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**EYE CONTACT:** Immediately rinse with clean water for 15 minutes. Remove contact lens if worn. 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. If breathing is difficult, give oxygen. If breathing stops, begin artificial respiration and get immediate medical attention.

**INGESTION:** DO NOT induce vomiting. Contact a physician or Poison Control Center immediately. If victim is conscious and alert, give several glasses of water to drink and get immediate medical attention. **NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.**

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**SECTION VII - REACTIVITY DATA**

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**STABILITY:** Stable.

**MATERIALS TO AVOID-** Avoid alteration of product properties before reuse. Calcining, which may result in crystalline formation or mixing with additives may alter toxicological properties. Strong oxidizers such as hydrogen peroxide and chlorine. Do not store near insoluble sulfur. Traces of amine vapors can cause reversion to the soluble sulfur form.

**CONDITIONS TO AVOID-** Avoid high temperatures (> 800 C) treatment.

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**SECTION VII - REACTIVITY DATA (continued)**

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**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon and nitrogen when burned.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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**SECTION VIII - SPILL OR LEAK PROCEDURES**

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** MINIMIZE SPILL AREA. Vacuum spill material and place in closed plastic bags for disposal. When discarded this material is not a hazardous waste as the term is defined in the Resource Conservation and Recovery Act (RCRA), 40 CFR Part 261.

**WASTE DISPOSAL METHOD:** Disposal via incineration in accordance with local, state, and federal regulations.

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**SECTION IX - SPECIAL PROTECTION INFORMATION**

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**RESPIRATORY PROTECTION:** Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts. Respiratory protection program must comply with 29 CFR 1910.134.

**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 V.

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

**EYE PROTECTION:** Safety goggles.

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

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**SECTION X - SPECIAL PRECAUTIONS**

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**HANDLING AND STORAGE:** 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. Spilled material will stain and discolor.

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

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**SECTION XI - REGULATORY INFORMATION**

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**TOXIC SUBSTANCE CONTROL ACT (TSCA):**

The components of this product are contained on the Inventory of the Toxic Substance Control Act.

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**SECTION XI - REGULATORY INFORMATION (Cont.)**

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**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
Silicon Dioxide	10	6	mg/m <sup>3</sup>
N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine	N/E	N/E	

**SARA TITLE III INFORMATION:****SECTION 313 - TOXIC CHEMICALS:**

This product does not contain any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40 CFR 372.

CAS REGISTRY #	CHEMICAL NAME	PERCENT BY WEIGHT
None		

This information must be included in all MSDS's 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, 28%

**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:**

DOT Shipping Name: Not regulated in transport.

DOT Identification Number: N/A

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**SECTION XII - OTHER INFORMATION**

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Revision Note: New issue of MSDS.

Prepared by: James L. Pye, Jr.

Title: Safety Coordinator

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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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