



Material Safety Data Sheet

Last Revision: 04/20/2007

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: SANTOFLEX® 7PPD
MSDS NO. FLXP0032
Chemical Name: N-(1,4-Dimethylpentyl)-N'-phenyl-p-phenylenediamine
Synonyms: Santoflex 14; 7PPD; 1,4-Benzenediamine, N-(1,4-dimethylpentyl)-N'-phenyl-
Use: Antidegradant
Manufactured By: Flexsys America L.P. 260 Springside Drive Akron OH 44333-2433 USA

Emergency Telephone: CHEMTREC: 1-800-424-9300 [TOLL FREE - USA and Territories]
703-527-3887 [ELSEWHERE - Collect Calls Accepted]
CANUTEC: 613-996-6666 [Canada]
SETIQ: 91-800-00-214 [Mexico]

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2. HAZARDS IDENTIFICATION

Emergency Overview: WARNING! May irritate the eyes. May irritate the skin. May cause staining and discoloration of the skin.

Eye Contact: Mild Eye Irritation: signs/symptoms can include redness, swelling, pain and tearing. May irritate eyes.

Skin Contact: May cause an allergic skin reaction. Contact with skin causes unsightly stains. Skin contact with molten material may result in a thermal burn. Mild Skin Irritation (after prolonged or repeated contact): sign/symptoms can include redness, swelling and itching.

Inhalation: Inhalation of mist will irritate mucous membranes.

Ingestion: Illness may occur after a single swallowing of relatively large quantities of this material.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
N-(1,4-Dimethylpentyl)-N'-phenyl-p-phenylenediamine	3081-01-4	> 97

4. FIRST AID MEASURES

In Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

On Skin: Wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy or properly dispose of contaminated shoes. NOTE: This material may stain or discolor the skin.

Inhaled: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention. If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

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4. FIRST AID MEASURES

Swallowed: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Notes To Physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): 386°F / 196.7°C
Flash Point Method: Tag Open Cup
Autoignition Temp. (°F/C): Not determined.
Lower Explosion Limit (LEL): Not determined.
Upper Explosion Limit (UEL): Not determined.

Extinguishing Media: Use water fog, carbon dioxide, foam or dry chemical.
Special Exposure Hazards: Fight fire from a safe distance and from a protected location. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways.

Special Protective Equipment: Fire fighters should wear full impervious protective clothing, including self-contained breathing equipment.

Unusual Fire/Explosion Hazards: Toxic emissions may result if product is involved in a fire.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Wear impervious personal protective equipment to protect eyes, skin and clothing. If material is in the liquid state, absorb liquid with inert materials. Scoop, sweep or shovel solids and place in a closed container for proper disposal.

Procedure for Cleaning/Absorption: Isolate spill and stop leak where safe. Contain liquid spills with sand or other inert materials. Scoop up and remove solids. Do NOT spread spilled product with water. Spilled material may stain and discolor surfaces.

CERCLA Reportable Quantity (RQ): Not Applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Keep away from food and smoking materials. Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded with material. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Do not reuse this container. Storage at temperatures above 90 F for an extended period of time should be avoided. Reclose containers of unused product. Keep containers tightly closed when not in use.

Storage: Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Storage at temperatures above 70° C is NOT recommended.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Wear safety glasses or goggles to protect against exposure. Wear eye protection appropriate to handling activities. Employees should wear appropriate protective (impervious) clothing and gloves when contact with material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection:	Normal work coveralls. Launder contaminated clothing before reuse. This material can stain and discolor skin. ATTENTION: PROLONGED OR REPEATED EXPOSURE CAN CAUSE ALLERGIC SKIN REACTION IN SENSITIVE INDIVIDUALS.
Gloves:	Use gloves as a standard industrial handling procedure. Appropriate chemical resistant gloves should be worn. Latex, butyl or nitrile rubber gloves are acceptable. Consult glove manufacturer for best type of glove for specific tasks.
Respiratory Protection:	Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure.
Ventilation:	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Use local exhaust to control to recommended P.E.L.
Airborne Exposure Limits:	Not Determined.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark oily liquid.
Odor:	SLIGHT AROMATIC
pH:	Not Applicable
Specific Gravity:	0.92 @ 60°C
Density:	1.0 @ 20°C
Bulk Density:	Not Determined
Melting Point (°F/C):	90°F / 32.4°C (Crystallizing Point)
Boiling Point (°F/C):	185.5°C @ 0.14 mm Hg; 231°C @ 3.5 mm Hg
Vapor Pressure:	1.25 x 10 ⁻¹⁰ mm Hg @ 25°C
Vapor Density (Air=1):	Not Determined
% Volatile by Volume:	0.5% Max.
Solubility in Water:	INSOLUBLE; 0.67 mg/l @ pH 7.0 and 25°C
Other Solubility:	Soluble in: Acetone Ethanol Benzene Naphtha
Viscosity:	282 SUS @50°C 84 SUS @75°C
Other Data:	Crystallizing Point 32.4°C. Ash = 0.1% max.
Molecular Weight:	282.42
Molecular Formula:	C19-H26-N2

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of handling, use and transportation. Stable if protected from heat and exposure to air.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen. Contact with air. Long-term storage at temperatures above 70°C is NOT recommended.
Materials to Avoid:	Strong oxidizers
Hazardous Decomposition Products:	Oxides of nitrogen. Carbon monoxide.
Additional Guidelines:	Storage at temperatures above 70° C is NOT recommended.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD50 (mg/kg):	2100 mg/kg (Rat)
Acute Dermal LD50 (mg/kg):	>5010 mg/kg (Rabbit)
Acute Inhalation LC50 (mg/l):	No mortality @ 0.14 mg/l (Rat)

Target Organs / Principle Routes of Exposure: Blood. Liver. Skin. Inhalation. Absorption through skin.

11. TOXICOLOGICAL INFORMATION

Ingestion:	Illness may occur after a single swallowing of relatively large quantities of this material.
Skin Contact:	May cause an allergic skin reaction. Contact with skin causes unsightly stains. Skin contact with molten material may result in a thermal burn. Mild Skin Irritation (after prolonged or repeated contact): sign/symptoms can include redness, swelling and itching.
Inhalation:	Inhalation of mist will irritate mucous membranes.
Eye Contact:	Mild Eye Irritation: signs/symptoms can include redness, swelling, pain and tearing. May irritate eyes.
Aggravated Conditions:	Dermal ailments. Blood disorders. This material or its emissions may cause an allergic or sensitization reaction and thereby aggravate systemic disease. Liver disorders.
Carcinogenicity Comment:	This product, or one of its ingredients present at 0.1% or more, is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC or OSHA.
Other Information:	Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory sensitization. May be a skin sensitizer.
Primary Irritation Effect:	Not a primary irritant in both animal and human studies.
Carcinogenicity:	Negative in standard tests using bacteria and/or yeast cells.
Genotoxicity:	Both negative and weak positive results in standard in vitro and in vivo tests using mammalian cells.
Reproductive/Developmental Toxicity:	No test data available. Similar compounds show no effects in animal studies.

12. ECOLOGICAL INFORMATION

Acute Fish Toxicity:	96Hr LC50 Rainbow Trout 0.42 mg/l. 96Hr LC50 Bluegill Sunfish 0.30 mg/l 96Hr LC50 Fathead Minnow 1.10 mg/l
Acute Crustaceans Toxicity:	48Hr LC50 Daphnia Magna 0.21 mg/l
Acute Algae Toxicity:	96Hr EC50 Algae (Cell Number) 0.70 mg/l
Octanol/Water Coefficient:	5.67 (Estimated)
Chemical Fate Information:	Biodegradation based on CO2 evolution: Very Slow. 0% after 35 days.
Other Information:	Rapid degradation via hydrolysis. 96% @ pH 7.0 and 25°C after 24 hours.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method:	This product is not regarded as hazardous waste. Dispose in accordance with local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations.
Contaminated Packaging:	If empty container retains product residues, all label precautions must be observed. Transport with all closures in place. Return for reuse or dispose according to national or local regulations. Do NOT reuse container.

14. TRANSPORT INFORMATION

DOT:	UN 3082, Environmentally Hazardous Substance, Liquid, N.O.S., (N-(1,4-Dimethylpentyl)-N'-phenyl-p-phenylenediamine), 9, III
DOT Reportable Quantity (lbs):	None
ICAO/IATA:	See DOT
IMDG:	See DOT
Marine Pollutant:	No
TDG (Canada):	See DOT
Remarks:	NOTE: NEW shipping description effective May 21, 2007.

15. REGULATORY INFORMATION

Worldwide Inventory Status

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15. REGULATORY INFORMATION

USA (TSCA):	Listed
Canada (DSL):	Listed
Canada (NDSL):	Not Applicable. Listed on the DSL.
European Union (EINECS/ELINCS):	Listed
Japan (ENCS):	Listed
Korea (ECL):	Listed
Australia (AICS):	Listed
New Zealand (NZ):	Not Listed
Phillipines (PICCS):	Listed
China (CLECS):	Listed.

US Regulatory Rules

SARA Section 302:	Not Applicable / None
SARA 311/312 Hazard Categories:	Immediate
SARA 313 Chemical:	Not Applicable / None
RCRA Status:	Not a RCRA waste.

Other Regulations:

California Proposition 65:	NONE
New Jersey Right-to-Know List:	Not Applicable.
Pennsylvania Right to Know List:	Not Applicable.
Florida Right to Know:	Not Applicable.
Minnesota Right to Know:	Not Applicable
Massachusetts Right to Know Law:	Not Applicable.
FDA Status 21 CFR:	Not Regulated For Use in food contact applications under 21 CFR.

Canadian Regulations

WHMIS Hazard Class:	D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects
NPRI:	Not Applicable [Canada]

16. OTHER INFORMATION

Hazard Rating Systems:

HMIS Classification:	HEALTH 1, FLAMMABILITY 1, REACTIVITY 0
NFPA Rating:	HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

The following has been revised since the last issue of this MSDS: New MSDS format. Transport information or classification has been changed/corrected.

Additional Information: Not Applicable

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END OF MSDS

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