

Santoflex(TM) 77PD

Version Revision Date: SDS Number: Date of last issue: -
1.1 12/02/2019 150000093097 Date of first issue: 09/06/2016
PRD SDSUS / Z8 / 0001

SECTION 1. IDENTIFICATION

Product name : Santoflex(TM) 77PD
Product code : 34060-00, P3406000, P3406002, P3406004, P3406005,
P3406007

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321


Recommended use of the chemical and restrictions on use

Recommended use : antioxidant (industrial)
Stabilizer
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Acute toxicity (Oral) : Category 4
Skin sensitization : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Warning
Hazard Statements : H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of
the workplace.
P280 Wear protective gloves.

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Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	CAS-No.	Concentration (% w/w)
N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine	3081-14-9	100

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Treat symptomatically.
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and plenty of water.
Wash contaminated clothing before re-use.
In the case of skin irritation or allergic reactions see a physician.
Thoroughly clean shoes before reuse.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : Seek medical advice.

Most important symptoms and effects, both acute and delayed : Harmful if swallowed.
May cause an allergic skin reaction.
Rash

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)
Dry chemical
Water spray

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Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting : None known.

Hazardous combustion products : No hazardous combustion products are known

Further information : None known.

Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions : Avoid release to the environment.

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : None known.

Advice on safe handling : Avoid contact with skin, eyes and clothing. Do not swallow. Wash thoroughly after handling.

Conditions for safe storage : Keep tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels. Ensure adequate ventilation.

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Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks : Wear suitable gloves.

Eye protection : Safety glasses

Protective measures : Remove respiratory and skin/eye protection only after vapors have been cleared from the area.
Ensure that eye flushing systems and safety showers are located close to the working place.
Use personal protective equipment as required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : oily

Color : purple

Odor : slight, amine-like

Odor Threshold : not determined

pH : not determined

Melting point/range : < -58 °F / -50 °C

Boiling point/boiling range : 327 - 336 °F / 164 - 169 °C
(1.2 hPa)

Flash point : 352 °F / 178 °C
(1,013 hPa)
Method: open cup

Evaporation rate : not determined

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper flammability limit : not determined

Lower explosion limit / Lower : not determined

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flammability limit

Vapor pressure : 0.0000015 hPa (77 °F / 25 °C)

Relative vapor density : not determined

Relative density : No data available

Density : 0.9 g/cm³ (81 °F / 27 °C)

Solubility(ies)

Water solubility : 0.8 mg/l (72 °F / 22 °C)

Autoignition temperature : not determined

Decomposition temperature : not determined

Viscosity

Viscosity, dynamic : 28.6 mPa.s (100.0 °F / 37.8 °C)

Viscosity, kinematic : 56 - 85 mm²/s (77 °F / 25 °C)

Explosive properties : Not classified

Oxidizing properties : Not classified

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Stable
None known.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Carbon dioxide (CO₂)
Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Harmful if swallowed.

Product:

Acute oral toxicity : LD50 Oral (Rat): 730 mg/kg
Assessment: Harmful if swallowed.

Acute inhalation toxicity : Remarks: No significant adverse effects were reported

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Acute dermal toxicity : LD50 Dermal (Rat): 3,160 mg/kg

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Acute oral toxicity : LD50 Oral (Rat): 730 mg/kg

Acute dermal toxicity : LD50 Dermal (Rat): 3,160 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Species : Rabbit
Exposure time : 24 h
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitization**Skin sensitization**

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Test Type : Skin sensitization
Species : Guinea pig
Result : sensitizing

Germ cell mutagenicity

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Genotoxicity in vitro : Test Type: Mutagenicity - Mammalian
Metabolic activation: +/- activation
Result: negative

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Test Type: Mutagenicity - Bacterial
 Metabolic activation: +/- activation
 Result: negative

Test Type: Chromosome aberration test in vitro
 Metabolic activation: +/- activation
 Result: negative

Germ cell mutagenicity - Assessment : Not classified as hazardous.

Carcinogenicity

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Remarks : This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Carcinogenicity - Assessment : Not classified

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Product:

Effects on fertility : Remarks: No data available

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Effects on fertility : Species: Rat
 Application Route: Ingestion
 General Toxicity Parent: NOAEL: 25 mg/kg body weight
 General Toxicity F1: NOAEL: 7.5 mg/kg body weight

Effects on fetal development : Species: Rat
 Application Route: Oral
 General Toxicity Maternal: NOAEL: 25 mg/kg body weight
 Developmental Toxicity: NOAEL: 150 mg/kg body weight

Reproductive toxicity - As- : Not classified

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assessment Not classified as hazardous.

STOT-single exposure

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Assessment : Based on available data, the classification criteria are not met.

STOT-repeated exposure

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Assessment : Based on available data, the classification criteria are not met.

Repeated dose toxicity**Components:****N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Species : Rat
LOAEL : 15.9 mg/kg
Application Route : in feed
Exposure time : 28 days

Aspiration toxicity

Not classified based on available information.

Components:**N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Not classified

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.06 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.13 mg/l
aquatic invertebrates : Exposure time: 48 h
Remarks: Read-across from a similar material

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (algae)): 0.335 mg/l
plants : Exposure time: 72 h

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Remarks: Read-across from a similar material

NOEC (Pseudokirchneriella subcapitata (algae)): 0.0958 mg/l

Exposure time: 72 h

Remarks: Read-across from a similar material

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes): 0.0037 mg/l
Exposure time: 30 d
Remarks: Read-across from a similar material

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.007 mg/l
Exposure time: 21 d
Remarks: Read-across from a similar material

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (Bacteria): 57 mg/l
Exposure time: 3 h

Persistence and degradability

Components:

N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:

Biodegradability : Biodegradation: 12 %
Exposure time: 28 d

Bioaccumulative potential

No data available

Mobility in soil

Components:

N,N'-bis(1,4-dimethylpentyl)-p-phenylenediamine:

Distribution among environmental compartments : Medium: Soil
log Koc: 4.76

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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IATA-DGR

UN/ID No. : UN 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (N,N'-Bis(1,4-dimethylpentyl)-p-phenylenediamine)
 Class : 9
 Packing group : III
 Labels : Class 9 - Miscellaneous dangerous substances and articles
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964
 Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG (solids) may lead to a non-regulated classification.

IMDG-Code

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S.
 (N,N'-Bis(1,4-dimethylpentyl)-p-phenylenediamine)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

Not regulated as a dangerous good
 Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG (solids) may lead to a non-regulated classification.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

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SARA 311/312 Hazards : Respiratory or skin sensitization
Acute toxicity (any route of exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

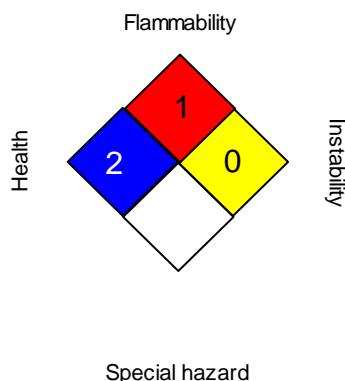
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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG -

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United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to : Chemical Safety Report
compile the Material Safety
Data Sheet

Revision Date : 12/02/2019

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8