

Santoflex(TM) 6PPD Pastilles

Version Revision Date: SDS Number: Date of last issue: 07/17/2019
2.2 12/11/2019 150000093128 Date of first issue: 09/06/2016
PRD

SECTION 1. IDENTIFICATION

Product name : Santoflex(TM) 6PPD Pastilles
Product code : 34087-00, P3408700, P3408721, P3408722, P3408724,
P3408725, P3408726, P3408727, P3408728, P3408731

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
Reproductive toxicity : Category 1B

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read
and understood.

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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/ protective clothing/ eye protection/ face protection.

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.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
 Substance name : N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
 CAS-No. : 793-24-8

Components

Chemical name	CAS-No.	Concentration (% w/w)
N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine	793-24-8	98.5 - 100

SECTION 4. FIRST AID MEASURES

If inhaled : Remove person to fresh air and keep comfortable for breathing.
 If breathing is difficult, give oxygen.
 Consult a physician if necessary.

In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
 If skin irritation or rash occurs: Get medical advice/ attention.
 Wash contaminated clothing before reuse.

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- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Get medical attention if symptoms occur.
- If swallowed : Rinse mouth.
Get medical attention if symptoms occur.
Do not induce vomiting unless directed to do so by medical personnel.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
- Notes to physician : Treat symptomatically.
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SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Dry powder
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)
- Further information : In case of fire and/or explosion do not breathe fumes.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment.
Avoid prolonged or repeated contact with skin.
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Ensure adequate ventilation.
Material can create slippery conditions.
Local authorities should be advised if significant spillages cannot be contained.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Avoid release to the environment.
Collect spillage.
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Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Wear appropriate personal protective equipment.
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
Drain or remove substance from equipment prior to break-in or maintenance.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.

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 used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.
After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations.

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- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Wear safety glasses with side shields (or goggles).
- Skin and body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Remove and wash contaminated clothing before re-use.
- Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Pastilles
- Color : purple, brown
- Odor : aromatic
- Odor Threshold : not determined
- pH : not determined
- Melting point/range : 120 °F / 49 °C
(1,013 hPa)
- Boiling point/boiling range : 325 - 329 °F / 163 - 165 °C
(1.33 hPa)
- Flash point : 396 °F / 202 °C
(1,013 hPa)
Method: Pensky-Martens closed cup
- Evaporation rate : not determined
- Flammability (solid, gas) : Not classified as hazardous.
- Upper explosion limit / Upper flammability limit : not determined
- Lower explosion limit / Lower flammability limit : 125 mg/m3
- Vapor pressure : 0.0000066 hPa (77 °F / 25 °C)
- Relative vapor density : not determined
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Relative density	:	0.995 (122 °F / 50 °C)
Density	:	995 kg/m3 (122 °F / 50 °C)
Solubility(ies)		
Water solubility	:	0.001 g/l (122 °F / 50 °C)
Solubility in other solvents	:	soluble Solvent: Hydrocarbons
Partition coefficient: n-octanol/water	:	log Pow: 4.68 (68 °F / 20 °C)
Autoignition temperature	:	1022 °F / 550 °C Method: VDI 2263 Blatt 1 2.6 Dust
Decomposition temperature	:	> 392 °F / 200 °C
Viscosity		
Viscosity, kinematic	:	not determined
Explosive properties	:	Not classified
Oxidizing properties	:	Not classified
Molecular weight	:	268.44 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None known.
Conditions to avoid	:	Heating in air.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Emits acrid smoke and fumes when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Harmful if swallowed.

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Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Acute oral toxicity : LD50 Oral (Rat): 893 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 7,940 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Species : Rabbit
Exposure time : 72 h
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Species : Rabbit
Result : slight
Exposure time : 72 h

Respiratory or skin sensitization**Skin sensitization**

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Test Type : Skin sensitization
Species : Guinea pig
Result : May cause sensitization by skin contact.

Test Type : Human experience
Result : May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Genotoxicity in vitro : Test Type: Mutagenicity - Bacterial
Metabolic activation: +/- activation

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Method: Bacterial Reverse Mutation Assay
Result: negative

Metabolic activation: +/- activation
Method: In vitro Mammalian Chromosome Aberration Test
Result: positive

Genotoxicity in vivo : Test Type: various
Species: Rat
Result: negative

Carcinogenicity

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Species : Rat, Male and Female
Application Route : Ingestion
Method : OECD Test Guideline 451
Remarks : Based on available data, the classification criteria are not met.

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

May damage fertility or the unborn child.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity Parent: NOAEL: 100 milligram per kilogram
General Toxicity F1: NOAEL: 100 milligram per kilogram
Method: OECD Test Guideline 421

STOT-single exposure

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Assessment : Not classified

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STOT-repeated exposure

Not classified based on available information.

Components:**N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Assessment : Not classified

Repeated dose toxicity**Components:****N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Species : Rat, male and female
NOAEL : 20 mg/kg
Application Route : by gavage
Exposure time : 28 days

Species : Rat, male and female
NOAEL : 13.5 mg/kg
Application Route : in feed
Exposure time : 2 year

Aspiration toxicity

Not classified based on available information.

Product:

Not classified

Information on likely routes of exposure**Product:**

Inhalation : Remarks: None known.
Skin contact : Remarks: May cause an allergic skin reaction.
Eye contact : Remarks: None known.
Ingestion : Remarks: Harmful if swallowed.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): 0.028 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

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Remarks: Read-across from a similar material

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.335 mg/l
Exposure time: 72 h
Remarks: Read-across from a similar material

NOEC: 0.23 mg/l
Exposure time: 72 h
Remarks: Read-across from a similar material

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Japanese medaka)): 0.0037 mg/l
Exposure time: 30 d

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

Persistence and degradability**Components:****N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Biodegradability : Method: Ready Biodegradability: Modified MITI Test (I)
Remarks: Not readily biodegradable.

Stability in water : Degradation half life: 2.9 h
Hydrolysis: at 24 °C

Bioaccumulative potential**Components:****N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Bioaccumulation : Bioconcentration factor (BCF): 569
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 4.68 (68 °F / 20 °C)

Mobility in soil**Components:****N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine:**

Distribution among environmental compartments : log Koc: 3.45
Method: QSAR model

Other adverse effects

No data available

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

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

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine)
Class : 9
Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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**

UN/ID/NA number : UN 3077
Proper shipping name : Environmentally hazardous substances, solid, n.o.s., Environmentally hazardous substance, solid, n.o.s.
(N-1,3-Dimethylbutyl-N'-phenyl-p-phenylenediamine)
Class : 9
Packing group : III
Labels : Class 9 - Miscellaneous dangerous substances and articles
ERG Code : 171
Marine pollutant : no
Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG (solids) may lead to a non-regulated classification.

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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.

SARA 311/312 Hazards : Respiratory or skin sensitization
Reproductive toxicity
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.

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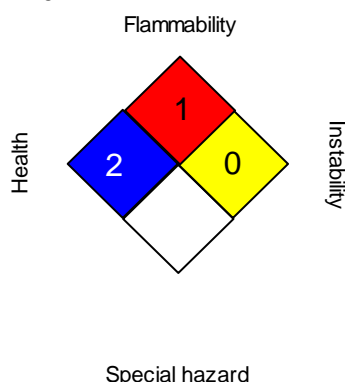
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No substances are subject to TSCA 12(b) export notification requirements.

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 concern-

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ing 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 - 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 : 12/11/2019

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