

HPD UNIQUE IDENTIFIER: 26486

CLASSIFICATION: 07 27 00 Air Barriers

PRODUCT DESCRIPTION: SOPRASEAL STICK PRIMER is a solvent-based primer specifically designed to maximize adhesion of self-adhesive membranes on exterior walls and foundations. It is composed of adhesive enhancing resins and fast-evaporating solvents.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- Basic Method

Threshold Disclosed Per

- Material
- Product

Threshold Level

- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Other

Residuals/Impurities

- Considered
- Partially Considered
- Not Considered

Explanation(s) provided for Residuals/Impurities?

- Yes  No

All Substances Above the Threshold Indicated Are:

Characterized  Yes Ex/SC  Yes  No

% weight and role provided for all substances.

Screened  Yes Ex/SC  Yes  No

All substances screened using Priority Hazard Lists with results disclosed.

Identified  Yes Ex/SC  Yes  No

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

SOPRASEAL STICK PRIMER [ ACETONE LT-P1 | END | DEV | EYE | PHY HYDROTREATED LIGHT STRAIGHT RUN (PETROLEUM) (LIGHT ALIPHATIC NAPHTA) LT-1 | CAN | MUL | GEN | MAM N-HEXANE (HEXANE) BM-1 | END | MUL | REP | SKI | PHY | MAM | AQU HEPTANE LT-P1 | END | MUL | SKI | PHY | MAM | AQU TOLUENE BM-1 | END | DEV | MUL | REP | SKI | PHY | MAM UNDISCLOSED LT-UNK UNDISCLOSED LT-1 | CAN ORANGE 46 (ORANGE PIGMENT) NoGS ]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

No substance other than those listed in this HPD have been added to the finished product during its manufacturing. Residuals or impurities could not be considered because information was not provided to the manufacturer by the raw materials vendors. Many substances are undisclosed to protect proprietary information.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 600 Regulatory (g/l): 515

Does the product contain exempt VOCs: Yes

Are ultra-low VOC tints available: N/A

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: CDPH Standard Method - N/A

VOC content: VOC Content

Management: ISO 9001:2015 Quality management systems

Management: ISO 14001:2015 Environmental management systems

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2021-11-04

PUBLISHED DATE: 2021-11-04

EXPIRY DATE: 2024-11-04

## Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.2, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-2-standard](http://www.hpd-collaborative.org/hpd-2-2-standard)

### SOPRASEAL STICK PRIMER

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: No

RESIDUALS AND IMPURITIES NOTES: Residuals or impurities could not be considered because information was not provided to the manufacturer by the raw materials vendors.

OTHER PRODUCT NOTES: Many substances are undisclosed to protect proprietary information.

#### ACETONE

ID: 67-64-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-11-04 19:28:22

#: 25.0000 - 50.0000 GS: LT-P1 RC: None NANO: No SUBSTANCE ROLE: Solvent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	MAK	Pregnancy Risk Group B
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]

SUBSTANCE NOTES: Acetone might be obtained from a recycled source but since it is not always the case we cannot claim recycled content.

#### HYDROTREATED LIGHT STRAIGHT RUN (PETROLEUM) (LIGHT ALIPHATIC NAPHTA)

ID: 64742-49-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-11-04 19:28:23

#: 25.0000 - 50.0000 GS: LT-1 RC: None NANO: No SUBSTANCE ROLE: Solvent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - REACH Annex XVII CMRs	Carcinogen Category 2 - Substances which should be regarded as if they are Carcinogenic to man
CAN	EU - Annex VI CMRs	Carcinogen Category 1B - Presumed Carcinogen based on animal evidence
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 3 - Severe Hazard to Waters
GEN	EU - REACH Annex XVII CMRs	Mutagen Category 2 - Substances which should be regarded as if they are Mutagenic to man
GEN	EU - Annex VI CMRs	Mutagen - Category 1B
CAN	GHS - Australia	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
GEN	GHS - Australia	H340 - May cause genetic defects [Germ cell mutagenicity - Category 1A or 1B]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H350 - May cause cancer [Carcinogenicity - Category 1A or 1B]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
GEN	EU - GHS (H-Statements) Annex 6 Table 3-1	H340 - May cause genetic defects [Germ cell mutagenicity - Category 1A or 1B]

SUBSTANCE NOTES: Light aliphatic naphta is one of three aliphatic solvent options to be used in this product in a range between 25 and 50% by weight.

### N-HEXANE (HEXANE)

ID: 110-54-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-11-04 19:28:23**

#: **25.0000 - 50.0000**

GS: **BM-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
END	ChemSec - SIN List	Endocrine Disruption
MUL	ChemSec - SIN List	CMR - Carcinogen, Mutagen &/or Reproductive Toxicant
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	CA EPA - Prop 65	Reproductive Toxicity - Male
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]
REP	EU - GHS (H-Statements) Annex 6 Table 3-1	H361f - Suspected of damaging fertility [Reproductive toxicity - Category 2]

**SUBSTANCE NOTES:** Hexane is one of three aliphatic solvent options to be used in this product in a range between 25 and 50% by weight. It might be obtained from a recycled source but since it is not always the case we cannot claim recycled content.

## HEPTANE

ID: 142-82-5

HAZARD SCREENING METHOD: <b>Pharos Chemical and Materials Library</b>		HAZARD SCREENING DATE: <b>2021-11-04 19:28:24</b>		
<b>%: 25.0000 - 50.0000</b>	<b>GS: LT-P1</b>	<b>RC: None</b>	<b>NANO: No</b>	<b>SUBSTANCE ROLE: Solvent</b>
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters		
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]		
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]		
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]		
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H400 - Very toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 1]		
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H410 - Very toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 1]		

**SUBSTANCE NOTES:** Heptane is one of three aliphatic solvent options to be used in this product in a range between 25 and 50% by weight. It might be obtained from a recycled source but since it is not always the case we cannot claim recycled content.

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-11-04 19:28:24**%: **10.0000 - 25.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	G&L - Neurotoxic Chemicals	Developmental Neurotoxicant
DEV	CA EPA - Prop 65	Developmental toxicity
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	CA EPA - Prop 65	Reproductive Toxicity - Female
REP	GHS - Japan	H360 - May damage fertility or the unborn child [Toxic to reproduction - Category 1A]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
PHY	EU - GHS (H-Statements) Annex 6 Table 3-1	H225 - Highly flammable liquid and vapour [Flammable liquids - Category 2]
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]
DEV	EU - GHS (H-Statements) Annex 6 Table 3-1	H361d - Suspected of damaging the unborn child [Reproductive toxicity - Category 2]

SUBSTANCE NOTES: Toluene might be obtained from a recycled source but since it is not always the case we cannot claim recycled content.

**UNDISCLOSED**ID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-11-04 19:28:25**%: **10.0000 - 20.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Adhesive-enhancing additive. Substance undisclosed to protect proprietary information.

**UNDISCLOSED**ID: **Undisclosed**HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-11-04 19:28:25**%: **5.0000 - 10.0000** GS: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Adhesive**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	CA EPA - Prop 65	Carcinogen

SUBSTANCE NOTES: Adhesive-enhancing additive. Substance undisclosed to protect proprietary information.

**ORANGE 46 (ORANGE PIGMENT)**

ID: 63467-26-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-11-04 19:28:26**

%: **0.1000 - 0.5000**

GS: **NoGS**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Pigment used for coloration of the primer.

*This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.*

VOC EMISSIONS	CDPH Standard Method - N/A		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2020-06-	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: Drummondville, Québec, Canada	23		
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES: N/A - This product is an exterior product therefore is not to be tested for VOC emissions.			

VOC CONTENT	VOC Content		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2020-06-	EXPIRY DATE:	CERTIFIER OR LAB: N/A
APPLICABLE FACILITIES: Drummondville, Québec, Canada	23		
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES: SOPRASEAL STICK PRIMER has a VOC content of 515 g/L.			

MANAGEMENT	ISO 9001:2015 Quality management systems		
CERTIFYING PARTY: Third Party	ISSUE DATE: 2021-09-	EXPIRY DATE: 2024-	CERTIFIER OR LAB: SGS ICS
APPLICABLE FACILITIES: Facilities covered by this certification: St Julien du Sault, France; Strasbourg, France; Val de Reuil, France; Sorgues, France; Luynes, France; Ambert, France; Cestas, France; La Chapelle Saint Luc, France; Saint Rambert, France; Golbey, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Wadsworth, Ohio, USA; Richmond, Québec, Canada; Gulfport, Mississippi, USA; Beauport, Québec, Canada; Oberrosbach, Germany; Grobbendonk, Belgium; Andenne, Belgium; Ijlst, Netherlands; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Salgareda, Italy; Blonie, Poland; Spreitenbach, Switzerland; Cham, Switzerland.	23	05-07	
CERTIFICATE URL: <a href="https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-9001-EN-1.pdf">https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-9001-EN-1.pdf</a>			
CERTIFICATION AND COMPLIANCE NOTES: Although all the plants cited above are covered by the certification, the only plant that manufactures the product covered by this HPD is the plant in Drummondville, Québec, Canada.			

MANAGEMENT	ISO 14001:2015 Environmental management systems		
CERTIFYING PARTY: Third Party	ISSUE DATE: 2021-09-	EXPIRY DATE: 2024-	CERTIFIER OR LAB: SGS ICS
APPLICABLE FACILITIES: Facilities covered by this certification: St Julien du Sault, France; Strasbourg, France; Val de Reuil, France; Sorgues, France; La Chapelle Saint Luc, France; Saint Rambert, France; Golbey, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Wadsworth, Ohio, USA; Richmond, Québec, Canada; Beauport, Québec, Canada; Grobbendonk, Belgium; Andenne, Belgium; Ijlst, Netherlands; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; Salgareda, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Blonie, Poland; Spreitenbach, Switzerland; Cham, Switzerland.	23	05-07	
CERTIFICATE URL: <a href="https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-14001-EN-1.pdf">https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-14001-EN-1.pdf</a>			
CERTIFICATION AND COMPLIANCE NOTES: Although all the plants cited above are covered by the certification, the only plant that manufactures SOPRASEAL STICK PRIMER is the plant in Drummondville, Québec, Canada.			

CERTIFYING PARTY: Third Party

ISSUE DATE: 2021-09-23

EXPIRY DATE: 2024-05-07

CERTIFIER OR LAB: SGS ICS

APPLICABLE FACILITIES: Facilities covered by this certification: St Julien du Sault, France; Strasbourg, France; La Chapelle Saint Luc, France; Saint Rambert, France; Drummondville, Québec, Canada; Chilliwack, British Columbia, Canada; Beauport, Québec, Canada; Wadsworth, Ohio, USA; Gulfport, Mississippi, USA; Andenne, Belgium; Chignolo d'Isola Bergamo, Italy; Frosinone, Italy; San Vito al Tagliamento, Italy; Verolanuova, Italy; Salgareda, Italy.

CERTIFICATE URL: <https://www.soprema.ca/wp-content/uploads/2021/10/SOPREMA-ISO-45001-EN-1.pdf>

CERTIFICATION AND COMPLIANCE NOTES: Although all the plants cited above are covered by the certification, the only plant that manufactures SOPRASEAL STICK PRIMER is the plant in Drummondville, Québec, Canada.

## + Section 4: Accessories

*This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.*

### SOPRASEAL STICK 1100T

HPD URL: <https://www.soprema.ca/search-documentation/?label%5B%5D=Health%20Product%20Declaration>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

SOPRASEAL STICK PRIMER is one option for surface preparation before installing SOPRASEAL STICK 1100T.

### COLPHENE 3000

HPD URL: <https://www.soprema.ca/search-documentation/?label%5B%5D=Health%20Product%20Declaration>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

SOPRASEAL STICK PRIMER is one option for surface preparation before installing COLPHENE 3000.

## E Section 5: General Notes

VOC Content has been established after consideration of acetone as an exempt compound for VOC calculations.



**MANUFACTURER INFORMATION**

**MANUFACTURER:** Soprema  
**ADDRESS:** 1688 Jean-Berchmans-Michaud St.  
 Drummondville QC J2C8E9, Canada  
**WEBSITE:** www.soprema.ca

**CONTACT NAME:** Jean-François Côté  
**TITLE:** Director, Standards and Scientific Affairs  
**PHONE:** 819-478-8166 x.3290  
**EMAIL:** jfcote@soprema.ca

*The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.*

**KEY**

**Hazard Types**

<b>AQU</b> Aquatic toxicity	<b>LAN</b> Land toxicity	<b>PHY</b> Physical hazard (flammable or reactive)
<b>CAN</b> Cancer	<b>MAM</b> Mammalian/systemic/organ toxicity	<b>REP</b> Reproductive
<b>DEV</b> Developmental toxicity	<b>MUL</b> Multiple	<b>RES</b> Respiratory sensitization
<b>END</b> Endocrine activity	<b>NEU</b> Neurotoxicity	<b>SKI</b> Skin sensitization/irritation/corrosivity
<b>EYE</b> Eye irritation/corrosivity	<b>NF</b> Not found on Priority Hazard Lists	<b>UNK</b> Unknown
<b>GEN</b> Gene mutation	<b>OZO</b> Ozone depletion	
<b>GLO</b> Global warming	<b>PBT</b> Persistent, bioaccumulative, and toxic	

**GreenScreen (GS)**

<b>BM-4</b> Benchmark 4 (prefer-safer chemical)	<b>LT-1</b> List Translator 1 (Likely Benchmark-1)
<b>BM-3</b> Benchmark 3 (use but still opportunity for improvement)	<b>LT-UNK</b> List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
<b>BM-2</b> Benchmark 2 (use but search for safer substitutes)	
<b>BM-1</b> Benchmark 1 (avoid - chemical of high concern)	
<b>BM-U</b> Benchmark Unspecified (due to insufficient data)	
<b>LT-P1</b> List Translator Possible 1 (Possible Benchmark-1)	<b>NoGS</b> No GreenScreen.

**Recycled Types**

**PreC** Pre-consumer recycled content  
**PostC** Post-consumer recycled content  
**UNK** Inclusion of recycled content is unknown  
**None** Does not include recycled content

**Other Terms:**

**GHS SDS** Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

**Inventory Methods:**

**Nested Method / Material Threshold** Substances listed within each material per threshold indicated per material  
**Nested Method / Product Threshold** Substances listed within each material per threshold indicated per product  
**Basic Method / Product Threshold** Substances listed individually per threshold indicated per product

**Nano** Composed of nano scale particles or nanotechnology  
**Third Party Verified** Verification by independent certifier approved by HPDC  
**Preparer** Third party preparer, if not self-prepared by manufacturer  
**Applicable facilities** Manufacturing sites to which testing applies

*The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:*

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

*Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.*

*The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.*

*The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.*