

HPD UNIQUE IDENTIFIER: 1664195584

CLASSIFICATION: 09 83 00 Acoustic Finishes

PRODUCT DESCRIPTION: Quietspace® Panel, Autex Panel Absorber (APA), Accent Ceiling Tiles are acoustic panels made from PET material.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

- Basic Method

Threshold Level

- 100 ppm

Residuals/Impurities Evaluation

- Completed

Explanation(s) provided :

- Yes

For all contents above the threshold, the manufacturer has:

Characterized Yes No

Provided weight and role.

Screened Yes No

Provided screening results using HPDC-approved methods.

Identified Yes No

Provided name and CAS RN or other identifier.

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.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY GREENSCREEN SCORE | HAZARD TYPE

QUIETSPACE® PANEL, APA, ACCENT CEILING TILES [ POLYETHYLENE TEREPHTHALATE (PET) LT-P1 POLYETHYLENE UNK TITANIUM DIOXIDE BM-1 CAN | END | MAM CARBON BLACK BM-1 CAN | EYE | MAM | PHY PIGMENT YELLOW 147 LT-UNK PIGMENT BLUE 15 BM-3 PHTHALOCYANINE GREEN LT-UNK C.I. PIGMENT RED 149 LT-P1 WATER BM-4 1-TRIDECANOL, DIHYDROGEN PHOSPHATE, DIPOTASSIUM SALT NoGS 1-OCTADECANOL, PHOSPHATE, POTASSIUM SALT LT-UNK C12-14 SEC-PARETH-7 LT-UNK | EYE | SKI | AQU POLYOXYL 40 HYDROGENATED CASTOR OIL LT-UNK ]

Number of Greenscreen BM-4/BM3 contents ... 2
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, BM-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

We declare product ingredients up to 100ppm.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- No

PREPARER: Self-Prepared

VERIFIER:
VERIFICATION #:

SCREENING DATE: 2024-01-22

PUBLISHED DATE: 2024-01-22

EXPIRY DATE: 2027-01-22

## 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 2.3, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-3-standard](http://www.hpd-collaborative.org/hpd-2-3-standard)

### QUIETSPACE® PANEL, APA, ACCENT CEILING TILES

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities declared on suppliers' safety data sheets

OTHER PRODUCT NOTES:

#### POLYETHYLENE TEREPHTHALATE (PET)

ID: 25038-59-9

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2024-01-22 14:15:33

%: 95.0000 - 100.0000

GreenScreen: **LT-P1**

RC: **PostC**

NANO: **No**

SUBSTANCE ROLE: **Textile component**

HAZARD TYPE

LIST NAME AND SOURCE

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS

LIST NAME AND SOURCE

NOTIFICATION

None found

No listings found on Additional Hazard Lists

SUBSTANCE NOTES: PET fibres in APA, Accent Ceiling Tiles, & QuietSpace® Panel contain a minimum of 45% post-consumer recycled PET (from PET bottle-flake).

#### POLYETHYLENE

ID: 9002-88-4

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2024-01-22 14:15:34

%: 2.0000 - 4.0000

GreenScreen: **LT-UNK**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Adhesive**

HAZARD TYPE

LIST NAME AND SOURCE

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS

LIST NAME AND SOURCE

NOTIFICATION

None found

No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

#### TITANIUM DIOXIDE

ID: 13463-67-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: 2024-01-22 14:15:34

#: 0.0000 - 1.0000

GreenScreen: **BM-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE         | LIST NAME AND SOURCE                                    | WARNINGS  |
|---------------------|---|---|
| CAN                 | US CDC - Occupational Carcinogens                       | Occupational Carcinogen   |
| CAN                 | CA EPA - Prop 65  | Carcinogen - specific to chemical form or exposure route  |
| CAN                 | IARC  | Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources  |
| CAN                 | MAK   | Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value  |
| END                 | TEDX - Potential Endocrine Disruptors                   | Potential Endocrine Disruptor   |
| CAN                 | MAK   | Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels  |
| CAN                 | IARC  | Group 2b - Possibly carcinogenic to humans  |
| CAN                 | EU - GHS (H-Statements) Annex 6 Table 3-1               | H351 - Suspected of causing cancer [Carcinogenicity - Category 2]   |
| CAN                 | GHS - Japan   | H351 - Suspected of causing cancer [Carcinogenicity - Category 2]   |
| MAM                 | GHS - Japan   | H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1] |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE                                    | NOTIFICATION  |
| RESTRICTED LIST     | Cradle to Cradle Products Innovation Institute (C2CPII) | C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022<br><br>Children's Products                                    |
| RESTRICTED LIST     | Cradle to Cradle Products Innovation Institute (C2CPII) | C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022<br><br>Formulated Consumer Products                           |
| RESTRICTED LIST     | Cradle to Cradle Products Innovation Institute (C2CPII) | C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022<br><br>Cosmetics & Personal Care Products                     |
| POSITIVE LIST       | US Environmental Protection Agency (US EPA)             | US EPA - DfE Safer Chemicals Ingredients list (SCIL)<br><br>Colorants - Green Circle (Verified Low Concern)   |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

**CARBON BLACK**

ID: **1333-86-4**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2024-01-22 14:15:34**

#: 0.0000 - 1.0000

GreenScreen: **BM-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE | LIST NAME AND SOURCE              | WARNINGS  |
|-------------|-----------------------------------|---|
| CAN         | US CDC - Occupational Carcinogens | Occupational Carcinogen   |
| CAN         | MAK                               | Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification  |
| CAN         | CA EPA - Prop 65                  | Carcinogen - specific to chemical form or exposure route  |
| CAN         | IARC                              | Group 2b - Possibly carcinogenic to humans  |
| EYE         | GHS - New Zealand                 | Eye irritation category 2   |
| CAN         | GHS - New Zealand                 | Carcinogenicity category 2  |
| CAN         | GHS - Japan                       | H351 - Suspected of causing cancer [Carcinogenicity - Category 2]   |
| MAM         | GHS - Japan                       | H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1] |
| PHY         | GHS - Japan                       | H251 - Self-heating;; may catch fire [Self-heating substances and mixtures - Category 1]  |

| ADDITIONAL LISTINGS | LIST NAME AND SOURCE | NOTIFICATION                                 |
|---------------------|----------------------|--|
| None found          |                      | No listings found on Additional Hazard Lists |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

**PIGMENT YELLOW 147**

ID: 4118-16-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:34**

%: **0.0000 - 1.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE | LIST NAME AND SOURCE | WARNINGS                                       |
|-------------|----------------------|--|
| None found  |                      | No warnings found on HPD Priority Hazard Lists |

| ADDITIONAL LISTINGS | LIST NAME AND SOURCE | NOTIFICATION                                 |
|---------------------|----------------------|--|
| None found          |                      | No listings found on Additional Hazard Lists |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

**PIGMENT BLUE 15**

ID: 147-14-8

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:34**

%: **0.0000 - 1.0000** GreenScreen: **BM-3** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE         | LIST NAME AND SOURCE                        | WARNINGS  |
|---------------------|---|---|
| None found          |   | No warnings found on HPD Priority Hazard Lists  |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE                        | NOTIFICATION  |
| POSITIVE LIST       | US Environmental Protection Agency (US EPA) | US EPA - DfE Safer Chemicals Ingredients list (SCIL)<br>Colorants - Green Circle (Verified Low Concern) |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

### PHTHALOCYANINE GREEN

ID: 1328-53-6

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:34**

%: **0.0000 - 1.0000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE         | LIST NAME AND SOURCE                        | WARNINGS  |
|---------------------|---|---|
| None found          |   | No warnings found on HPD Priority Hazard Lists  |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE                        | NOTIFICATION  |
| POSITIVE LIST       | US Environmental Protection Agency (US EPA) | US EPA - DfE Safer Chemicals Ingredients list (SCIL)<br>Colorants - Green Circle (Verified Low Concern) |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

### C.I. PIGMENT RED 149

ID: 4948-15-6

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:34**

%: **0.0000 - 1.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

| HAZARD TYPE         | LIST NAME AND SOURCE | WARNINGS                                       |
|---------------------|----------------------|--|
| None found          |                      | No warnings found on HPD Priority Hazard Lists |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE | NOTIFICATION                                   |
| None found          |                      | No listings found on Additional Hazard Lists   |

SUBSTANCE NOTES: Hazard warnings do not apply as the substance is bound within the fibre.

### WATER

ID: 7732-18-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:34**

%: **0.0000 - 0.1000** GreenScreen: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Lubricant**

| HAZARD TYPE         | LIST NAME AND SOURCE                         | WARNINGS  |
|---------------------|--|---|
| None found          |  | No warnings found on HPD Priority Hazard Lists  |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE                         | NOTIFICATION  |
| EXEMPT              | European Union / European Commission (EU EC) | EU - REACH Exemptions<br><br>Exempted from REACH Annex IV listing due to intrinsic safety |

SUBSTANCE NOTES: This substance is a component of finishing oil.

**1-TRIDECANOL, DIHYDROGEN PHOSPHATE, DIPOTASSIUM SALT**

ID: 68541-11-7

| HAZARD DATA SOURCE: <b>Pharos Chemical and Materials Library</b> |                          | HAZARD SCREENING DATE: <b>2024-01-22 14:15:35</b> |                 |                                  |
|--|--------------------------|---|-----------------|----------------------------------|
| %: <b>0.0000 - 0.1000</b>  | GreenScreen: <b>NoGS</b> | RC: <b>None</b>                                   | NANO: <b>No</b> | SUBSTANCE ROLE: <b>Lubricant</b> |
| HAZARD TYPE  | LIST NAME AND SOURCE     | WARNINGS  |                 |                                  |
| None found   |                          | No warnings found on HPD Priority Hazard Lists    |                 |                                  |
| ADDITIONAL LISTINGS  | LIST NAME AND SOURCE     | NOTIFICATION                                      |                 |                                  |
| None found   |                          | No listings found on Additional Hazard Lists      |                 |                                  |

SUBSTANCE NOTES: This substance is a component of finishing oil.

**1-OCTADECANOL, PHOSPHATE, POTASSIUM SALT**

ID: 68987-29-1

| HAZARD DATA SOURCE: <b>Pharos Chemical and Materials Library</b> |                            | HAZARD SCREENING DATE: <b>2024-01-22 14:15:35</b> |                 |                                  |
|--|----------------------------|---|-----------------|----------------------------------|
| %: <b>0.0000 - 0.1000</b>  | GreenScreen: <b>LT-UNK</b> | RC: <b>None</b>                                   | NANO: <b>No</b> | SUBSTANCE ROLE: <b>Lubricant</b> |
| HAZARD TYPE  | LIST NAME AND SOURCE       | WARNINGS  |                 |                                  |
| None found   |                            | No warnings found on HPD Priority Hazard Lists    |                 |                                  |
| ADDITIONAL LISTINGS  | LIST NAME AND SOURCE       | NOTIFICATION                                      |                 |                                  |
| None found   |                            | No listings found on Additional Hazard Lists      |                 |                                  |

SUBSTANCE NOTES: This substance is a component of finishing oil.

**C12-14 SEC-PARETH-7**

ID: 84133-50-6

|  |                            |   |                 |                                  |
|--|----------------------------|---|-----------------|----------------------------------|
| HAZARD DATA SOURCE: <b>Pharos Chemical and Materials Library</b> |                            | HAZARD SCREENING DATE: <b>2024-01-22 14:15:35</b> |                 |                                  |
| %: <b>0.0000 - 0.1000</b>  | GreenScreen: <b>LT-UNK</b> | RC: <b>None</b>                                   | NANO: <b>No</b> | SUBSTANCE ROLE: <b>Lubricant</b> |

| HAZARD TYPE         | LIST NAME AND SOURCE | WARNINGS  |
|---------------------|----------------------|---|
| EYE                 | GHS - New Zealand    | Eye irritation category 2   |
| SKI                 | GHS - Australia      | H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]            |
| AQU                 | GHS - New Zealand    | Hazardous to the aquatic environment - acute category 1                           |
| AQU                 | GHS - New Zealand    | Hazardous to the aquatic environment - chronic category 1                         |
| EYE                 | GHS - Australia      | H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1] |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE | NOTIFICATION  |
| None found          |                      | No listings found on Additional Hazard Lists                                      |

SUBSTANCE NOTES: This substance is a component of finishing oil.

**POLYOXYL 40 HYDROGENATED CASTOR OIL**

ID: **61788-85-0**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-01-22 14:15:36**

#: **0.0000 - 0.1000** GreenScreen: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Lubricant**

| HAZARD TYPE         | LIST NAME AND SOURCE | WARNINGS                                       |
|---------------------|----------------------|--|
| None found          |                      | No warnings found on HPD Priority Hazard Lists |
| ADDITIONAL LISTINGS | LIST NAME AND SOURCE | NOTIFICATION                                   |
| None found          |                      | No listings found on Additional Hazard Lists   |

SUBSTANCE NOTES: This substance is a component of finishing oil.

## Section 3: Certifications and Compliance

*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 V1.2 (Section 01350/CHPS) - Classroom & Office scenario |                            |
|--|--|----------------------------|
| CERTIFYING PARTY: Third Party  | ISSUE DATE: 2019-12-20 00:00:00  | CERTIFIER OR LAB: Eurofins |
| APPLICABLE FACILITIES: Auckland, New Zealand   | EXPIRY DATE:   | Product Testing A/S        |
| CERTIFICATE URL:   |  |                            |
| CERTIFICATION AND COMPLIANCE NOTES: Test results after 14 days, office room scenario: VOC emissions = 0.092 mg/m <sup>3</sup> ; Formaldehyde emissions < 0.002 mg/m <sup>3</sup> . The measured VOC and formaldehyde emissions meet the threshold limits set under applicable green building standards and regulations. Test report is available on request. |  |                            |

## 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.*

No accessories are required for this product.

## Section 5: General Notes

Materials ingredients information is based upon the details provided by our suppliers.



**MANUFACTURER INFORMATION**

MANUFACTURER: **Autex Industries Ltd**  
 ADDRESS: **702-718 Rosebank Road**  
**Avondale, Auckland 1026**  
 COUNTRY: **New Zealand**

WEBSITE: **https://www.autexglobal.com/**  
 CONTACT NAME: **Aidan Hill**  
 TITLE: **Group Technical & Sustainability Manager**  
 PHONE: **+64 9 828 9179**  
 EMAIL: **ahill@autex.co.nz**

*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-P1</b> List Translator Possible 1 (Possible Benchmark-1) |
| <b>BM-3</b> Benchmark 3 (use but still opportunity for improvement) | <b>LT-1</b> List Translator 1 (Likely Benchmark-1)             |
| <b>BM-2</b> Benchmark 2 (use but search for safer substitutes)      | <b>LT-UNK</b> List Translator Benchmark Unknown                |
| <b>BM-1</b> Benchmark 1 (avoid - chemical of high concern)          | <b>NoGS</b> No GreenScreen.                                    |
| <b>BM-U</b> Benchmark Unspecified (due to insufficient data)        |  |

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, [www.greenscreenchemicals.org](http://www.greenscreenchemicals.org), and Best Practices for Hazard Screening on the HPDC website ([hpd-collaborative.org](http://hpd-collaborative.org)).

**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*

