Appendix H

Indoor Air Survey Forms

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Ambient Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	Amb1	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2300	Start Pressure ("Hg)	-30
End Date/Time	3-31-10 / 0659	End Pressure ("Hg)	-6
Canister ID	33562	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr

Tubing type used: NA Length of tubing: NA cm Tubing volume: NA cc

Volume purged: NA cc @ NA min 1 to 3 volumes purged @ < 200cc/min? NA

Weather Conditions at Start of Sampling:

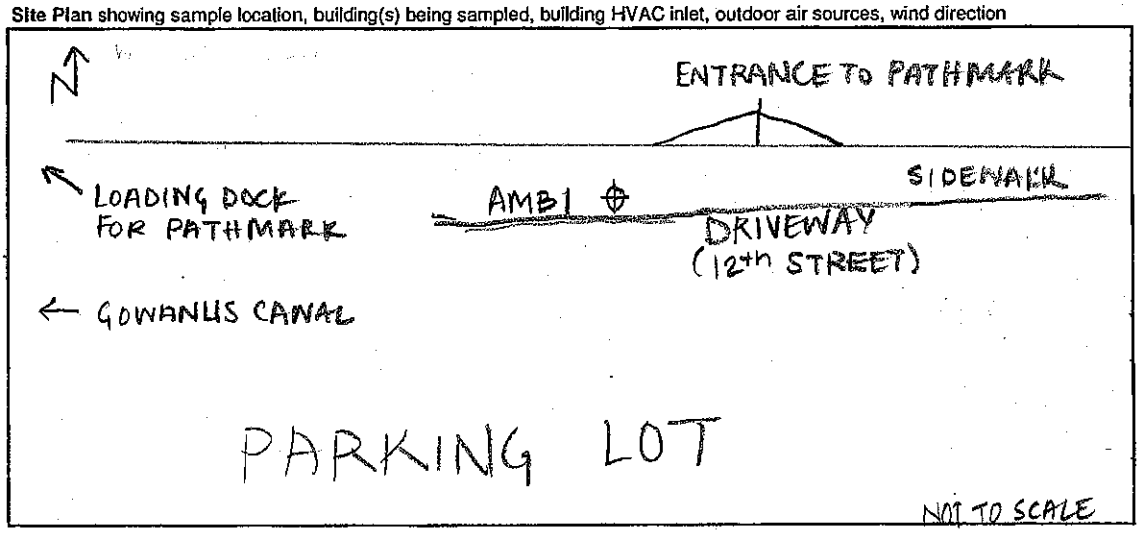
Air temperature (°F): 43-46 Rainfall: light/intermittent Wind direction: NW

Barometric pressure: 29.50 to 29.65 Relative humidity: 89% - 93% Wind speed (mph): 5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 inHg to 29.65 inHg from 1200 to 0700. Rain was light and intermittent.

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction



Comments:

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Indoor Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECom
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	IA1	Vacuum gauge "zero" ("Hg)	Yes
Start Date/Time	3-30-10 / 2252	Start Pressure ("Hg)	-31
End Date/Time	3-31-10 / 0701	End Pressure ("Hg)	-5
Canister ID	12007	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8hr
Associated ambient air sample ID	Amb1	Associated sub-slab vapor sample ID	SV1

Tubing type used	NA	Length of tubing	NA	cm	Tubing volume	NA	cc
Volume purged	NA	cc @	NA	min	1 to 3 volumes purged @ < 200cc/min?		NA

Weather Conditions at Start of Sampling:

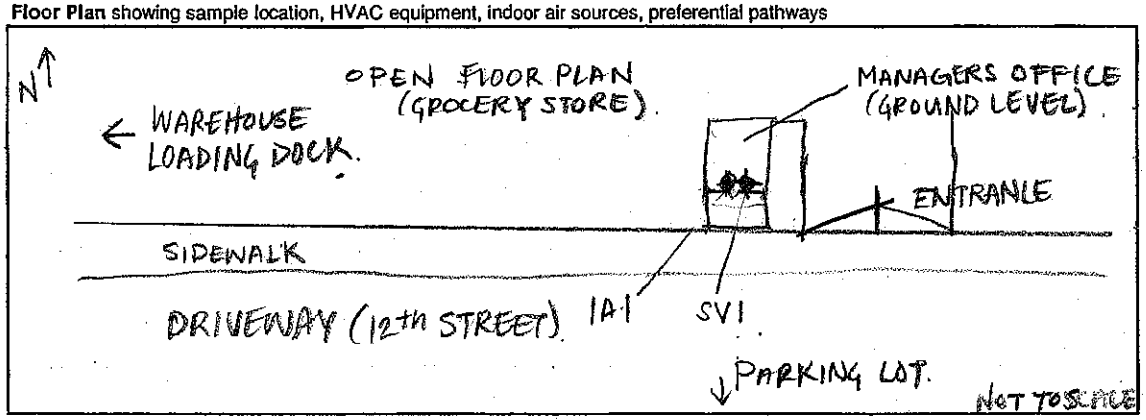
Air temperature (°F)	43-46	Rainfall	light/intermittent	Wind direction	NW
Barometric pressure	29.50 to 29.65	Relative humidity	89% - 93%	Wind speed (mph)	5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 in Hg to 29.65 in Hg from 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F)	70	Indoor relative humidity (%)	NA
Building Survey and Chemical Inventory Form Completed?	yes	Photograph IDs	

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways



Comments:

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Sub-slab Vapor (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	SV1	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2253	Start Pressure ("Hg)	-31
End Date/Time	3-31-10 / 0701	End Pressure ("Hg)	-5
Canister ID	406	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated indoor air sample ID	IA1	Associated ambient air sample ID	Amb1

Tubing type used: thick walled polyethylene Length of tubing: 137 cm Tubing volume: 9.7 cc

Volume purged: 200 cc @ .17 ~~min~~ 10 sec 1 to 3 volumes purged @ < 200cc/min? yes

Weather Conditions at Start of Sampling:

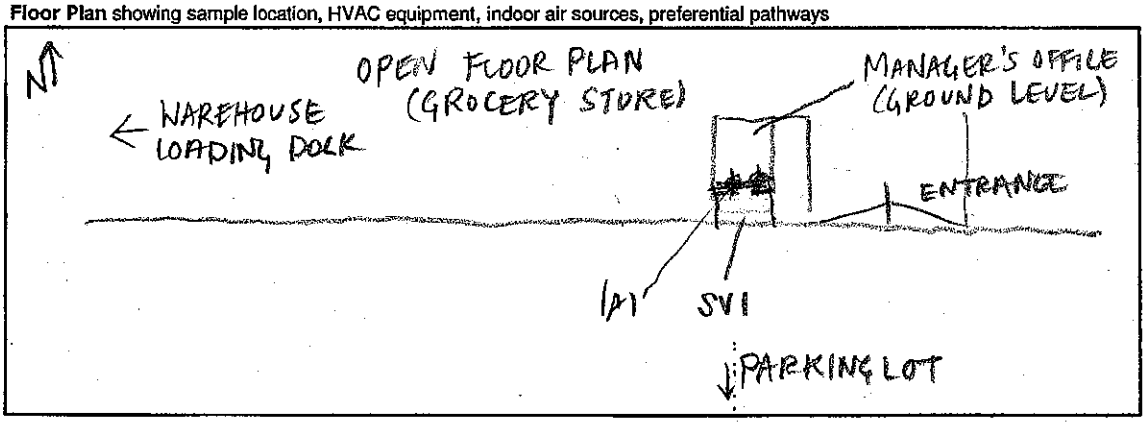
Air temperature (°F)	43-46	Rainfall	very light	Wind direction	From NW
Barometric pressure	start 29.50 End 29.65			Wind speed (mph)	5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 to 29.65 over the sampling duration

Indoor air temp (°F)	70	Indoor relative humidity (%)	NA
Building Survey and Chemical Inventory Form Completed?	Yes	Photograph IDs	

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways



Comments: LINOLEUM TILE ON OFFICE FLOOR. SV-1 POINT INSTALLED ON 3/30/2010. CONCRETE SLAB BENEATH TILE.

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Indoor Air (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	IA2 | IA2 Dup	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10/2257 | 3-30-10/2257	Start Pressure ("Hg)	-31 | -31
End Date/Time	3-31-10/0706 | 3-31-10/0708	End Pressure ("Hg)	-31 | -5.5
Canister ID	34345 | 94600	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated ambient air sample ID	Amb1	Associated sub-slab vapor sample ID	SV2

Tubing type used	NA	Length of tubing	NA	cm	Tubing volume	NA	cc
Volume purged	NA	cc @	NA	min	1 to 3 volumes purged @ < 200cc/min?		NA

Weather Conditions at Start of Sampling:

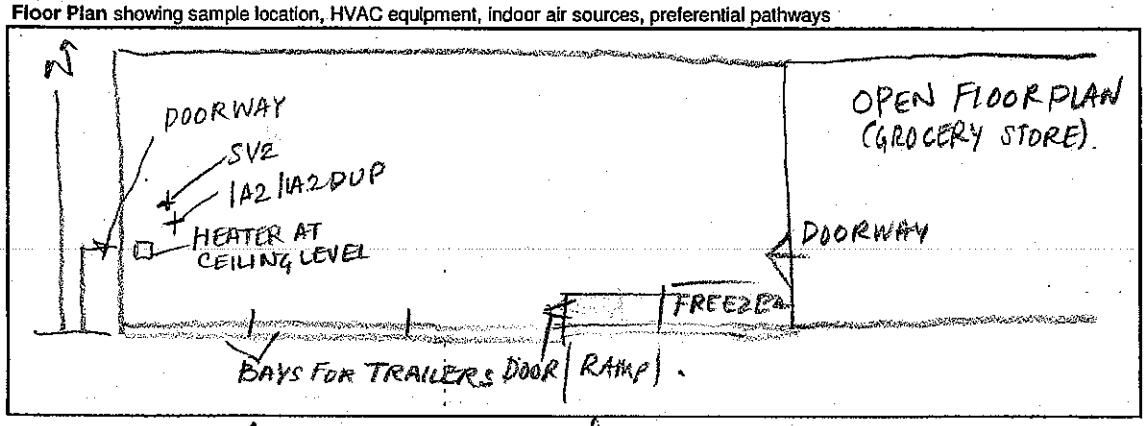
Air temperature (°F)	43-46	Rainfall	light, intermittent	Wind direction	NW
Barometric pressure	29.50-29.65	Relative humidity	89%-93%	Wind speed (mph)	5-10

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric Pressure steadily rose from 29.50 in Hg to 29.65 in Hg From 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F)	62	Indoor relative humidity (%)	NA
Building Survey and Chemical Inventory Form Completed?	yes	Photograph IDs	

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways



Comments: IA2 Dup is a duplicate sample of IA2.

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Sub-slab Vapor (Canister) Sample Collection Field Form

Project #	60137361	Consultant	AECOM
Project Name	Metropolitan MGP	Collector	Jesse Lloyd

Sample ID	SV2	Vacuum gauge "zero" ("Hg)	yes
Start Date/Time	3-30-10 / 2256	Start Pressure ("Hg)	32
End Date/Time	3-31-10 / 0706	End Pressure ("Hg)	6
Canister ID	1586	End pressure > "zero"?	yes
Flow controller ID	NA	Sampling duration (intended)	8 hr
Associated Indoor air sample ID	IA2	Associated ambient air sample ID	Amb1

Tubing type used: Thick walled polyethylene Length of tubing: 137 cm Tubing volume: 9.7 cc

Volume purged: 200 cc @ 0.17 min (l/sec) 1 to 3 volumes purged @ < 200cc/min? yes

Weather Conditions at Start of Sampling:

Air temperature (°F): 43-46 Rainfall: light/intermittent Wind direction: NW

Barometric pressure: 29.50 to 29.65 Relative humidity: 89% - 93% Wind speed (mph): 5-10

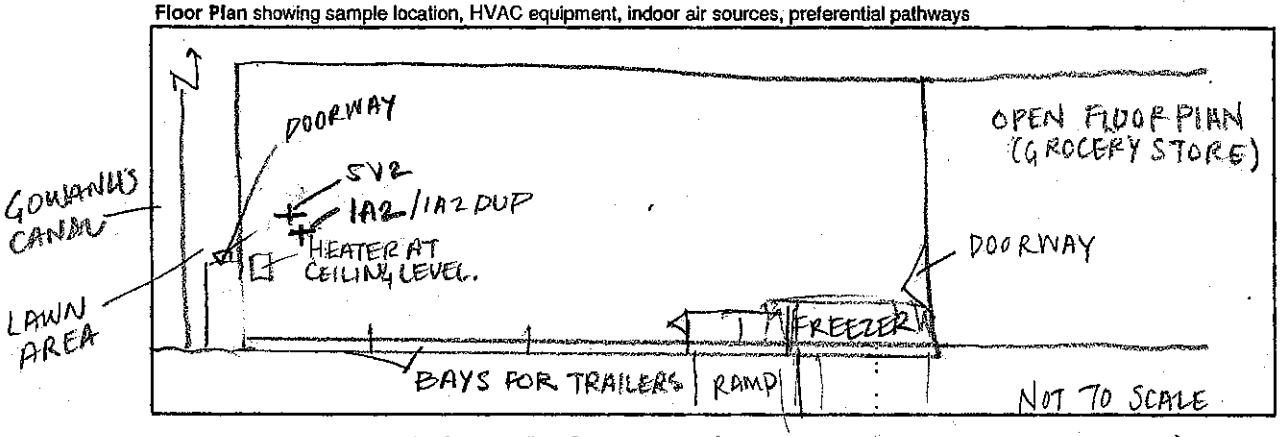
Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Barometric pressure steadily rose from 29.50 inHg to 29.65 inHg from 1200 to 0700. Rain was light and intermittent.

Indoor air temp (°F): 62 Indoor relative humidity (%): NA

Building Survey and Chemical Inventory Form Completed? yes Photograph IDs:

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways



Comments: CONCRETE SLAB FLOOR. SV-2 POINT INSTALLATION ON 3/30/2011. SV-2 POINT 5'4" EAST FROM WEST WALL. No observed cracks in concrete slab.

Site Photograph Log SV-1 and SV-2

SV-1 point installation (March 30, 2010) facing southwest
Location: Managers office near entrance to 137 12th Street, along inside wall

SV-2 point installation (March 30, 2010) facing northwest
Location: Warehouse/loading dock area of 137 12th Street, along western wall

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Jesse Lloyd/Jennifer Pfeiffer **Date/Time Prepared:** March 31, 2010

Preparer's Affiliation: AECOM Environmental **Phone No:** (978) 589-3012

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Pathmark First Name:

Address: 1-37 12th Street, New York, NY 11215

County: Kings

Home Phone: (718) 788-5100 Office Phone:

Number of Occupants/persons at this location: Age of Occupants:

2. OWNER OR LANDLORD: (Check if same as occupant)

Interviewed: Y / (N)

Last Name: HPA Associates First Name:

Address: 1-37 12th Street, New York, NY 11215

County: Kings

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses~~/Condos
Modular	Log Home	**Other:** Large grocery store

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Path Mart Grocery Store

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? NA

Other characteristics:

Number of floors: 1 Building age:

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

Note: The warehouse/storage area where IA2 and SV2 were taken was not insulated.

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is only one floor. The smoke tracer gently drifted upwards at both sampling locations.

Airflow near source: There is no known source material.

Outdoor air infiltration: A moderate amount of outdoor air infiltares the building through the main entrance/exit at the front of the store. These doors have a sensor that opens them automatically when someone gets near the door. The SVI sampling was conducted when the store was closed, so these doors were shut for the majority of the sampling time.

There is a large door the warehouse/storage area to the outside. The are large gaps in this door way allowing for outside infiltration.

Infiltration into air ducts: No air ducts were observed near the sampling areas.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	(Cinder block)
b. Basement type:	full	crawlspace	slab	other:	(No basement)
c. Basement floor:	concrete	dirt	stone	other:	(No basement)
d. Basement floor:	uncovered	covered	covered with:		(No basement)
e. Concrete floor:	unsealed	(sealed)	sealed with: 1'x 1' tiles at IA1/SV1 and painted at IA2/SV2		
f. Foundation walls:	poured	block	stone	(other:)	Foundation could not be observed
g. Foundation walls:	unsealed	sealed	(sealed with: NA)		
h. The basement is:	wet	damp	dry	moldy:	(No basement)
i. The basement is:	finished	unfinished	partly finished:		(No basement)
j. Sump present?	Y / (N)				
k. Water in sump?	Y / N / (not applicable)				

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There were no cracks, drains or utility ports observed near the sampling areas.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

(Hot air circulation)	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: N/A

Boiler/furnace located in: Basement Outdoor Main Floor Other:

Air conditioning: (Central Air) Window units Open Windows None

Are there air distribution ducts present? Y / (N)

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: NA

1st Floor: The first floor is occupied by shoppers and workers during business hours, 6 am to 11 pm, and occupied by workers during off hours.

2nd Floor: NA

3rd Floor: NA

4th Floor: NA

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / (N) / NA Please specify

Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / (N) When?

e. Is a kerosene or unvented gas space heater present? Y / (N) Where?

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type?

g. Is there smoking in the building? Y / (N) How frequently?

h. Have cleaning products been used recently? (Y) / N When & Type?

i. Have cosmetic products been used recently? Y / (N) When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Unknown

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When?

l. Have air fresheners been used recently? Y / N When & Type? Unknown

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented?

n. Is there a bathroom exhaust fan? Y / (N) If yes, where vented?

o. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? Unknown

Are there odors in the building? Y / (N)
If yes, please describe:

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? NA

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
(Unknown)

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other:

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: NA

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** (NA)

c. Responsibility for costs associated with reimbursement explained? Y / N / (NA)

d. Relocation package provided and explained to residents? Y / N / (NA)

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: NA

First Floor: Refer to sample form for floor plan.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

Refer to Sample form for Outdoor Plot

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rae

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N
No products found to have potential to affect indoor air quality						

*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project # 60137361 Consultant Arcom

Project Name metro Collector R. Pappajian, S. Bi[illegible]baum

Sample ID SV-3

Start Date/Time 0910 4-2-11 Vacuum gauge "zero" ("Hg) yes

End Date/Time 4-2-11 1540 Start Pressure ("Hg) -29.5

Canister ID 3404 End Pressure ("Hg) -5

Flow controller ID 01023 End pressure > "zero"? yes

Associated indoor air sample ID IA-3 Sampling duration (intended) 8

Associated ambient air sample ID AMB-3

Tubing type used Teflon Length of tubing 4' cm Tubing volume cc

Volume purged 1 L cc @ 5 min 1 to 3 volumes purged @ < 200cc/min?

Weather Conditions at Start of Sampling:

Air temperature (°F) 45°F Rainfall Wind direction

Barometric pressure Wind speed (mph)

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F Indoor relative humidity (%) Unknown

Building Survey and Chemical Inventory Form Completed? yes Photograph IDs See Attached

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

See DOH forms for floor plan

Comments: Sample point passed He test

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Ambient Air (Canister) Sample Collection Field Form

Project # 60137361 Consultant AECOM

Project Name Mello Collector R. Papazian S. Birnbaum

Sample ID AMB-3

Vacuum gauge "zero" ("Hg)

Start Date/Time 0910 4-2-11 Start Pressure ("Hg) -30

End Date/Time 4-2-11 End Pressure ("Hg) -17

Canister ID 1622 End pressure > "zero"?

Flow controller ID Sampling duration (intended) 8hr

Tubing type used Teflon tubing Length of tubing 3.5 cm Tubing volume cc

Volume purged 1L cc @ 5 min 1 to 3 volumes purged @ < 200cc/min? NA

Weather Conditions at Start of Sampling:

Air temperature (°F) 45 F Rainfall NA Wind direction W-E

Barometric pressure 30.2 Relative humidity 40 Wind speed (mph) ~ 5-10 mph

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction

See DoH Forms

Comments:

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Indoor Air (Canister) Sample Collection Field Form

Project # 60137361 Consultant AECOM

Project Name Metro Collector R Papazian S. Birnbaum

Sample ID IA-3

Vacuum gauge "zero" ("Hg) yes

Start Date/Time 4-2-11 0911 Start Pressure ("Hg) -30

End Date/Time 4-2-11 355 (1555) End Pressure ("Hg) -4.5

Canister ID 1616 End pressure > "zero"? yes

Flow controller ID 00911 Sampling duration (intended) 8 hr.

Associated ambient air sample ID AMB-3 Associated sub-slab vapor sample ID SV-3

NA { Tubing type used _____ Length of tubing _____ cm Tubing volume _____ cc

Volume purged _____ cc @ _____ min 1 to 3 volumes purged @ < 200cc/min? _____

Weather Conditions at Start of Sampling:

Air temperature (°F) 45°F Rainfall NA Wind direction _____

Barometric pressure _____ Relative humidity _____ Wind speed (mph) _____

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F Indoor relative humidity (%) _____

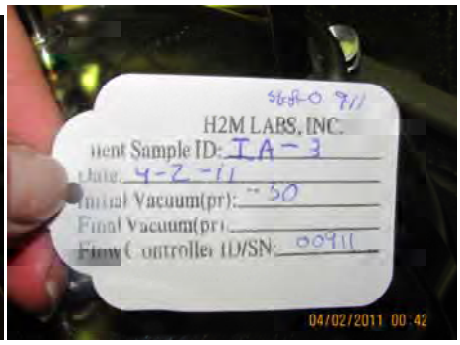
Building Survey and Chemical Inventory Form Completed? _____ Photograph IDs _____

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

See DOH Forms

Comments:

Site Photographs SV-3, IA-3, and AMB-3



SV-3 and IA-3 Samples

AMB-3 Sample

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Rita Papagian **Date/Time Prepared:** April 2, 2011

Preparer's Affiliation: AECOM Environmental **Phone No:** (845) 425-4980

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT:

Interviewed: (Y) N

Last Name: NY Hardwood Lumber First Name:

Address: 60 12th Street, New York, NY 11215

County: Kings

Home Phone: (718)369-2668 Office Phone:

Number of Occupants/persons at this location: Age of Occupants:

2. OWNER OR LANDLORD: (Check if same as occupant)

Interviewed: Y (N)

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses~~/Condos
Modular	Log Home	**Other:** hardwood flooring and supplies storage

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Path Mart Grocery Store

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? NA

Other characteristics:

Number of floors: 1 Building age:

Is the building insulated? Y / (N) How air tight? Tight / (Average) / Not Tight

Note:

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is only one floor.

Airflow near source: air blowing downward from ceiling.

Outdoor air infiltration: N/A

Infiltration into air ducts: N/A, ceilings too high to check.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	(Cinder block)
b. Basement type:	full	crawlspace	slab	other: No basement	
c. Basement floor:	concrete	dirt	stone	other: No basement	
d. Basement floor:	uncovered	covered	covered with: No basement		
e. Concrete floor:	unsealed	(sealed)	sealed with:		
f. Foundation walls:	poured	(block)	stone	other:	
g. Foundation walls:	unsealed	sealed	sealed with: NA		
h. The basement is:	wet	damp	dry	moldy: No basement	
i. The basement is:	finished	unfinished	partly finished: No basement		

j. Sump present? Y / (N)

k. Water in sump? Y / N / (not applicable)

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There were no cracks, drains or utility ports observed near the sampling areas.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

~~Hot air circulation~~	Heat pump	Hot water baseboard	
(Space Heaters)	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: N/A

Boiler/furnace located in: Basement Outdoor Main Floor Other:

Air conditioning: Central Air (Window units) Open Windows None

Are there air distribution ducts present? Y / (N)

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: NA

1st Floor: The first floor is occupied by customers and workers during business hours (warehouse, showroom).

2nd Floor: offices

3rd Floor: NA

4th Floor: NA

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / N / NA
Please specify
Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / N When? unknown

e. Is a kerosene or unvented gas space heater present? Y / N Where?

f. Is there a workshop or hobby/craft area? Y / N Where & Type?

g. Is there smoking in the building? Y / N How frequently?

h. Have cleaning products been used recently? Y / N When & Type?

i. Have cosmetic products been used recently? Y / N When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When? 2 weeks prior on sprinkler line

k. Is there new carpet, drapes or other textiles? Y / N Where & When?

l. Have air fresheners been used recently? Y / N When & Type? Unknown

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? Unknown

Are there odors in the building? Y / N
If yes, please describe:

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? NA

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other:

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: NA

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** (NA)

c. Responsibility for costs associated with reimbursement explained? Y / N / (NA)

d. Relocation package provided and explained to residents? Y / N / (NA)

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: NA

First Floor: Refer to sample form for floor plan.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

Refer to Sample form for Outdoor Plot

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rae

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N

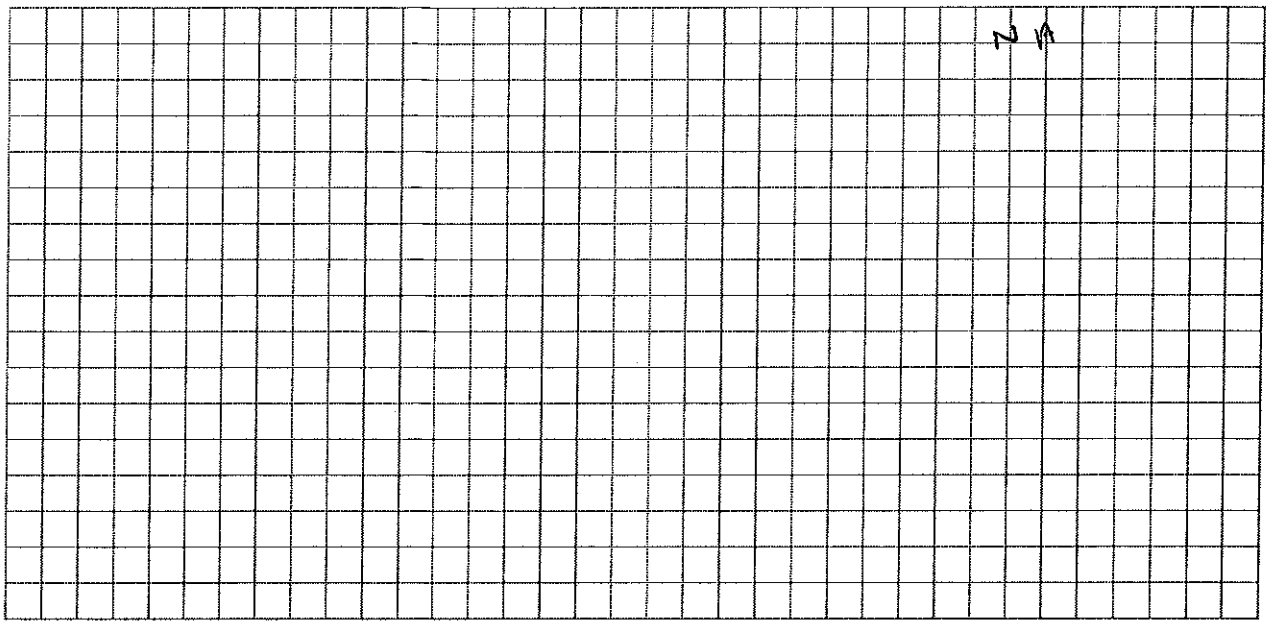
*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

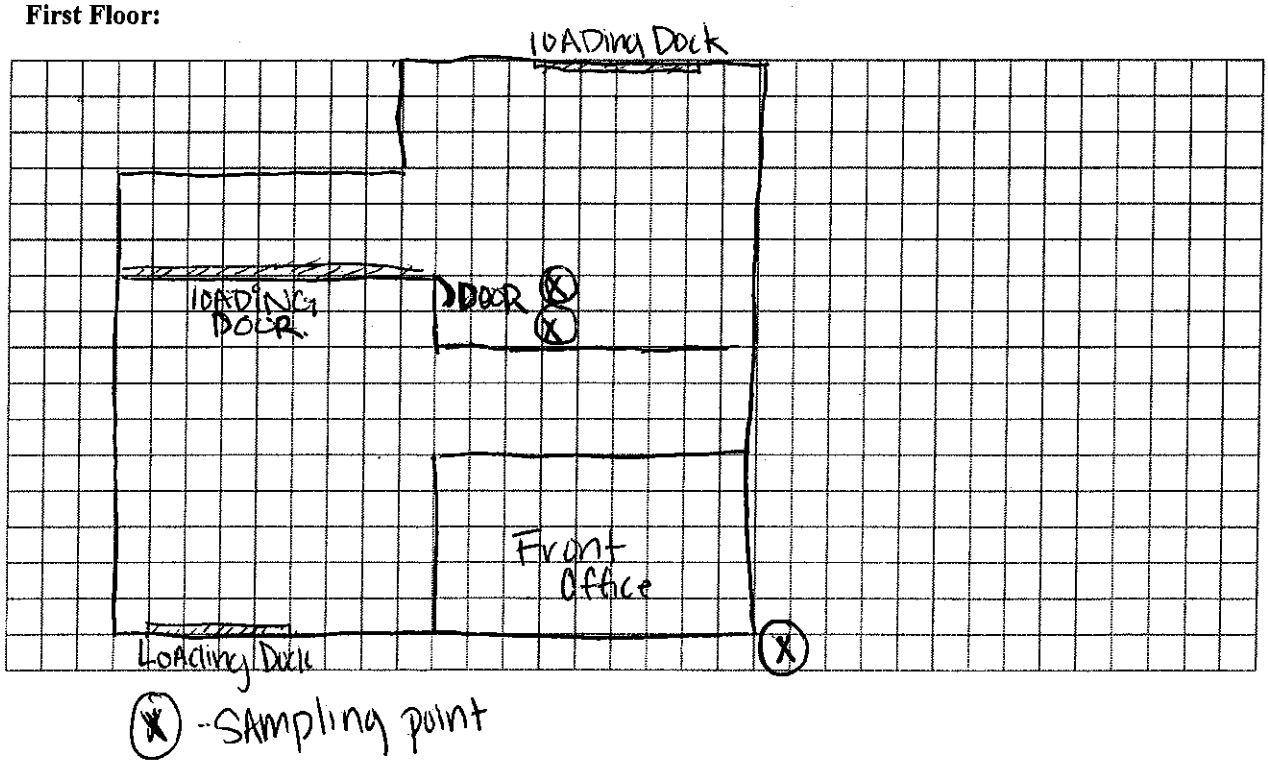
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



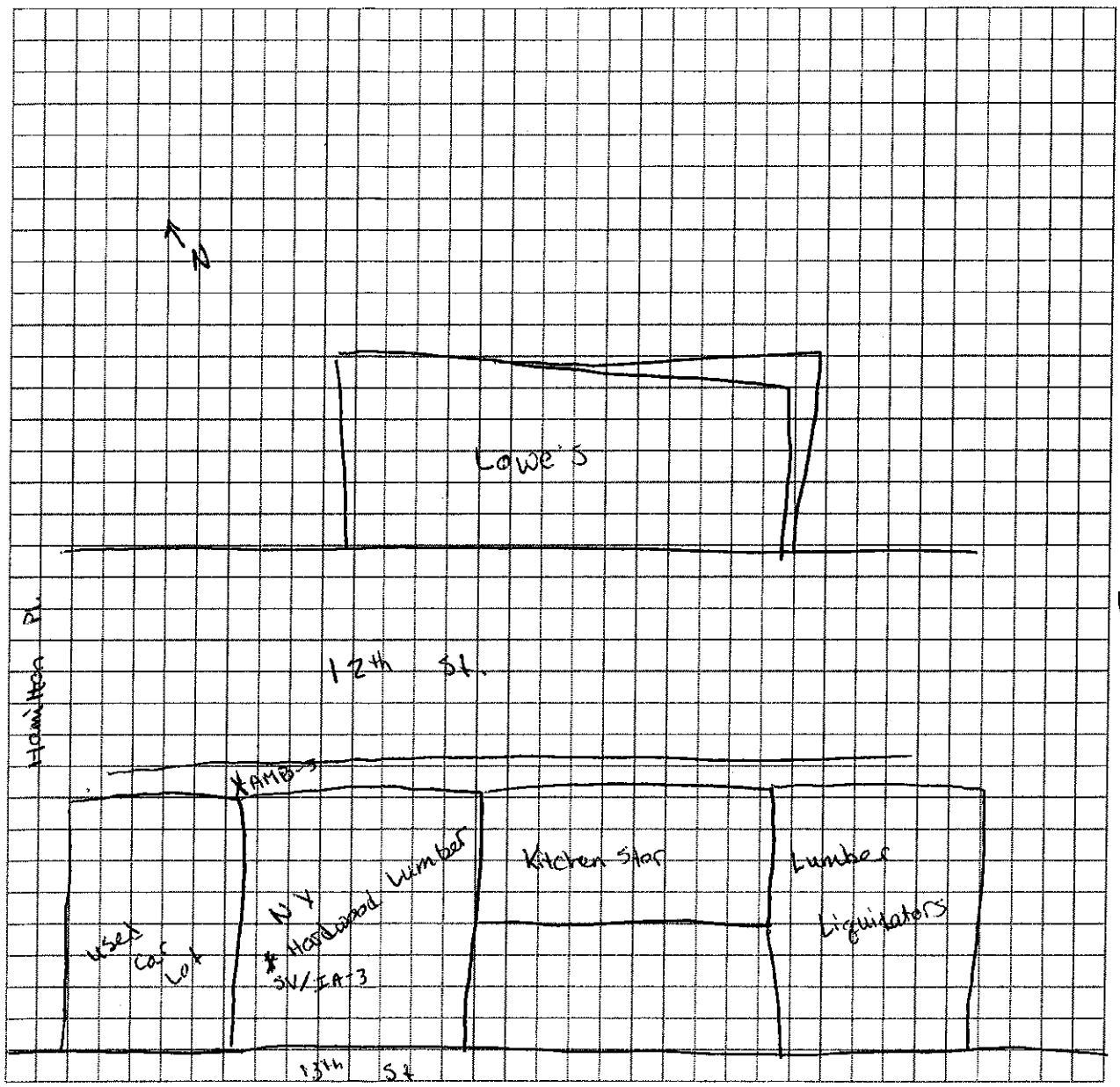
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
	murexin Proof Presque Adhesive	23-4gal	new buckets	NL (or no access as they were wrapped)	Ø PPB	Y
	Bostik's Best flooring urethane Adhesive	4	5 gal buckets		Ø PPB	Y
	Stauf one step SMP960 wood flooring Adhesive	4gal Buckets			Ø PPB	
	2 or 3 small paint cans to high to see them	C	See	Photos		
	Omni Al Base coat				Ø PPB	
	EZ mix					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	**BST Urethanes**
MSDS name	BST Urethane Series
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Generic description	Polyurethane Sealant
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. Hazards Identification

Emergency overview

Contact with this material can cause irritation to the skin, eyes and mucous membranes. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water. Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.

Potential health effects

Eyes

This product may cause irritation to the eyes. May cause temporary corneal injury.

Skin

This product may cause irritation to the skin. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.

Inhalation

This product may cause irritation to the respiratory system. Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.

Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Target organs

The lungs and skin may be targeted and damaged by components of this product.

Signs and symptoms

Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, sore throat, eye irritation, skin irritation and/or diarrhea.

Hazard statements

This product contains Methylene Diphenyl Isocyanate (MDI) which is a potential skin sensitizer and has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity. Risk to your health depends on duration and concentration of exposure.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Stoddard solvent	8052-41-3	3 - 7
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact flush with large amounts of water while removing contaminated clothing. If skin irritation persists, call a physician. For severe exposure, immediately get under a safety shower and begin rinsing.
Inhalation	If inhaled, immediately remove the affected person to fresh air. Call a physician if symptoms develop or persist. Administer oxygen or artificial respiration as needed.
Ingestion	If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting without medical advice. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Notes to physician	Provide general supportive measures and treat symptomatically. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

5. Fire Fighting Measures

Hazardous combustion products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Extinguishing media	
Suitable extinguishing media	Dry chemical, foam, carbon dioxide, water fog.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
Flash point	142 °F (61.1 °C)

6. Accidental Release Measures

Emergency action	Wear appropriate personal protective equipment. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provencial regulations for disposal. Regulations vary. Consult local authorities before disposal.
Spill or leak procedure	Scrape up material and place in steel drums that are in good condition. Thoroughly clean area where spill occurred. Remove sources of ignition. Ventilate area of spill.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Liquid spills: Cover spills with absorbent clay or sawdust and collect material in open container and neutralize with a solution containing 2% liquid detergent, 3% concentrated ammonium hydroxide and 95% water. Wash spill area clean with the neutralization solution. Remove container to a safe place, cover loosely and allow to stand for 24 to 48 hours letting evolved carbon dioxide escape. Collect and contain for disposal. Pellet or chip spill: Collect and contain for salvage or disposal. Molten adhesive spill: Placard hot material, allow to cool and remove. If material is not cured once cooled, follow neutralization directions for liquids listed above. Collect and contain for disposal.

Reporting See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

Handling Do not get this material in your eyes, on your skin, or on your clothing. Wash hands after handling and before eating. Do not breathe gas/fumes/vapor/spray. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.

Storage Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep away from direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition.

Empty container precaution Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Explosion proof exhaust ventilation should be used.

Personal protective equipment

Eye protection Wear safety glasses with side shields.

Skin and body protection Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Respiratory protection Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

General Eyewash fountains and emergency showers should be readily available.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE (MDI) 0.005 PPM
Stoddard solvent	8052-41-3	STODDARD SOLVENT 100 PPM

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE 0.2 MGM3 - 0.020 PPM 10-min
Stoddard solvent	8052-41-3	STODDARD SOLVENT 1800 MGM3 15-min

US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Stoddard solvent	8052-41-3	STODDARD SOLVENT 525 MGM3 - 100 PPM

9. Physical & Chemical Properties

Target solids	95.4 %
Density	1.508 g/cc
Odor	Solvent
Color	Amber
Physical state	Paste
Freeze protect	No
VOC (Volatile Organic Compounds)	72 g/l

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.

Hazardous polymerization Hazardous polymerization can occur with elevated temperatures or contact with water.

Conditions to avoid Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides. Keep away from sources of ignition.

Stability This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

11. Toxicological Information

Carcinogenicity If this product contains any carcinogens, they will be noted below: This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

Local effects Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases. Chronic exposure may cause lung damage, including fibrosis and decreased lung function, which may be permanent.

12. Ecological Information

Ecotoxicological information Organic solvents produce slight to moderate toxicity to aquatic life.

13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

14. Transport Information

DOT

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

The product(s) covered by this M(SDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010 and the list of 8 substances proposed on December 15, 2010.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENEBIS(PHENYLISOCYANATE) (MDI) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

State regulations	If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below: Butyl Benzyl Phthalate (BBP) Di-Isodecyl Phthalate (DIDP) Naphthalene
International regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
HMIS Ratings	Health: 2* Flammability: 2 Physical hazard: 0 Personal protection: X
SARA 311/312 HAZARD CATEGORIES	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
WHMIS status	Controlled
WHMIS labeling	

WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

16. Other Information

Product name(s) covered	G62130 - BST URETHANE G62140 - BST URETHANE
Disclaimer	The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.
Further information	If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.
Issue date	03/07/2011
Prepared by	Bostik, Inc. Regulatory Affairs
Supercedes	03/03/2011

Professional Parquet Adhesive LE 555

(Profiparkettklebstoff LE 555)

> not containing water
> large application spectrum
> solvent resistant

Product Properties

Solvent-based, water-free, fast setting resin adhesive.

Application

For interior use only to glue short stick, right side up, finished and mosaic parquet. Suitable for radiant floor heating.

Product Data

Supplied form:
20 kg bucket 27 buck./540 kg per pal.
8 kg bucket 70 buck./560 kg per pal.

Storage: Do not store below +5°C in closed dunnage, may be stored for 6 months

Technical Data

Consumption:	0.7-1.1 kg/m² dep. on type of par. and substrate
Specific weight:	1.37 g/cm³
Installation time after:	approx. 10-15 min
Set after:	approx. 72 h
Ideal processing temp.:	+16°C to +22°C

Processing

Recommended tools: Notched trowel B3, PK

Substrate: The substrate must be dry, free of frost, firm, load-bearing, form stable and free of dirt, dust, oil, grease, separators and lose parts and be in accordance with ÖNORM B 2236/1 and B 2218.

Suitable for: Cement floors, wooden particle boards, anhydrite cement floors and poured asphalt.

Not suitable: For plastic, metal, water-repellant substrates.

Pre-treatment: The substrate must be treated according to applicable ÖNORM standards if required primer or putty. We recommend pre-treatment with Murexin products. The parquet must be of the same temperature as the substrate. (Ideal: +16°C to +22°C). Priming of substrate for radiant floor heating: Murexin Deep Penetration Primer L 3 or with deep penetration primer D7. Otherwise apply primers according to surface characteristics (e.g. heavy absorbing). Filled substrates must be sanded thoroughly with rough grit to achieve a well-absorbing surface.

Preparation: Apply adhesive with suitable, rough toothed trowel over the entire surface. Setting time is approx 10 – 15 minutes, therefore do not prepare a surface too large for the installation time. Place the parquet with slight pushing force und tap it – the back must be covered completely with adhesive. After 72 hours at the earliest the parquet flooring may be sanded for the first time.

Important notes

Adhere to the norms, guidelines and data sheets regarding subsurface. Do not process at temperatures below +5°C. High levels of humidity and low temperatures delay and high temperatures accelerate the setting and hardening. Do not add external materials.

Health and safety

Health and safety: Product-specific information regarding the composition, handling, cleaning, relevant measures and disposal can be found in the safety data sheet.

Murexin AG: A-2700 Wiener Neustadt, Franz von Furtenbach Straße 1
Tel.: +43(0)2622/27 401-0, Fax: +43(0)2622/27 401 DW 187
e-mail: info@murexin.com, Internet: www.murexin.com

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 *Revision: 21.07.2009*

*
1 Identification of substance

· **Trade name PROFESSIONAL PARQUET ADHESIVE LE 555**

· **Article number:** 7377/10

· **Application of the substance / the preparation** Adhesives

· **Manufacturer/Supplier:**
MUREXIN AG
Franz v. Furtenbachstr. 1
A-2700 Wiener Neustadt Tel.: +43 (0)2622/27401

· **Informing department:** r.wachlhofer@murexin.com
· **Emergency information:** Tel.: +43 (0)1/406 43 43 (Vergiftungsinformationszentrale)

*
2 Hazards identification

· **Hazard designation:**
F Highly flammable
· **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
· **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

*
3 Composition/information on ingredients

· **Chemical characterization**
· **Description:** Mixture consisting of the following components.

· **Dangerous components:**			
CAS: 79-20-9 EINECS: 201-185-2	methyl acetate	Xi, F; R 11-36-66-67	5-10%
CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	5-10%
CAS: 64-17-5 EINECS: 200-578-6	ethanol	F; R 11	2.5-5%

· **Additional information**
For the wording of the listed risk phrases refer to section 16 "List of relevant R phrases:".

*
4 First aid measures

· **After inhalation**
Supply fresh air and call for doctor for safety reasons.
In case of unconsciousness bring patient into stable side position for transport.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
· **After swallowing** In case of persistent symptoms consult doctor.

*
5 Fire fighting measures

· **Suitable extinguishing agents**
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

(Contd. on page 2)

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Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 1)

· ***Protective equipment:*** *No special measures required.*

*
6 Accidental release measures

· ***Person-related safety precautions:*** *Wear protective equipment. Keep unprotected persons away.*
· ***Measures for environmental protection:***
Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
· ***Measures for cleaning/collecting:***
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

*
7 Handling and storage

· ***Handling***
· ***Information for safe handling:***
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
· ***Information about protection against explosions and fires:***
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· ***Storage***
· ***Requirements to be met by storerooms and containers:***
Store in cool location.
Store only in the original container.
· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:***
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

*
8 Exposure controls and personal protection

· ***Additional information about design of technical systems:*** *No further data; see item 7.*

· **Components with critical values that require monitoring at the workplace:**	
79-20-9 methyl acetate	
OEL	Short-term value: 770 mg/m³, 250 ppm Long-term value: 616 mg/m³, 200 ppm
64-17-5 ethanol	
OEL	1920 mg/m³, 1000 ppm

· ***Additional information:*** *The lists that were valid during the compilation were used as basis.*

· ***Personal protective equipment***
· ***General protective and hygienic measures***
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
· ***Breathing equipment:*** *Not necessary if room is well-ventilated.*
· ***Protection of hands:*** *Protective gloves.*
· ***Material of gloves***

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 *Revision: 21.07.2009*

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 2)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· ***Eye protection:*** *Tightly sealed safety glasses.*

· ***Body protection:*** *Protective work clothing.*

*
9 Physical and chemical properties:

· **General Information**	
Form:	Pasty
Colour:	Beige
Smell:	Solvent-like
· **Change in condition**	
Melting point/Melting range:	n.b. °C
Boiling point/Boiling range:	n.b. °C
· **Flash point:**	10°C
· **Ignition temperature:**	425°C
· **Self-inflammability:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
· **Critical values for explosion:**	
Lower:	3.1 Vol %
Upper:	16.0 Vol %
· **Steam pressure at 20°C:**	220 hPa
· **Density at 20°C**	1.37 g/cm³
· **Solubility in / Miscibility with**	
Water:	Fully miscible
· **Viscosity:**	
dynamic at 20°C:	40000 mPas

10 Stability and reactivity

· ***Conditions to be avoided:*** *No decomposition if used according to specifications.*

· ***Dangerous reactions*** *No dangerous reactions known*

· ***Dangerous products of composition:*** *None*

*
11 Toxicological information

· ***Acute toxicity:***

· ***Primary irritant effect:***

· ***on the skin:*** *No irritant effect.*

· ***on the eye:*** *No irritant effect.*

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 *Revision: 21.07.2009*

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 3)

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information:

· **General notes:**
Water hazard class (Germany) 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

*
13 Disposal considerations

· **Product:**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
08 01 11	waste paint and varnish containing organic solvents or other dangerous substances

· **Uncleaned packagings:**
· **Recommendation:**
Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

*
14 Transport information

· **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

· **ADR/RID-GGVS/E Class:** 3 Flammable liquids.
· **Kemler Number:** 33
· **UN-Number:** 1133
· **Packaging group:** II
· **Label** 3
· **Designation of goods:** 1133 ADHESIVES
· **Limited quantities (LQ)** LQ6
· **Transport category** 2
· **Tunnel restriction code** D/E

· **Maritime transport IMDG/GGVSea:**

· **IMDG/GGVSea Class:** 3
· **UN Number:** 1133
· **Label** 3
· **Packaging group:** II
· **EMS Number:** F-E,S-D
· **Marine pollutant:** No

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2009 *Revision: 21.07.2009*

Trade name PROFESSIONAL PARQUET ADHESIVE LE 555

(Contd. of page 4)

· **Correct technical name:** ADHESIVES

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 3
· **UN/ID Number:** 1133
· **Label** 3
· **Packaging group:** II
· **Correct technical name:** ADHESIVES

*
15 Regulatory information

· **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives.

· **Code letter and hazard designation of product:**

F Highly flammable

· **Risk phrases:**
11 Highly flammable.

· **Safety phrases:**
2 Keep out of the reach of children.
7/9 Keep container tightly closed and in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29 Do not empty into drains.
33 Take precautionary measures against static discharges.
60 This material and its container must be disposed of as hazardous waste.

*
16 Other information:

· **List of relevant R phrases:**
11 Highly flammable.
36 Irritating to eyes.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

· **Contact:** Hr. Ing. Wachlhofer

· *** Data compared to the previous version altered.**

TECHNCAL DATA SHEET

SMP-960 One-Step®

Polymer Based Wood Flooring Adhesive

Special features

- provides sound barrier up to STC & IIC of 72 and 74 dB
- provides moisture barrier up to 12#/24 hrs/1000 SF (90% RH)
- certified "Green" class EC1 "very low emission"

Product Description

STAUF SMP-960 One-Step is an advanced formula, unique polymer 3-in-1 adhesive designed for professional wood flooring installation. It replaces isocyanate-containing urethane adhesives which can etch flooring surfaces. It is ozone and environmentally safe since it has no solvents or other hazardous materials. It is certified 'green'. And it meets ASTM standards for sound and impact noise control. Long open time allows for easy installations. No rolling is required. Since there is no water or solvent present, it will not cause dimensional changes to wood flooring. SMP-960 offers superior flexibility and moisture-retarding capability.
The adhesive spreads easily and has a non-slump formula that will help insure contact and adhesive transfer because the ridges will bridge normal gaps between the flooring and sub floor. It allows fast installation even with complicated patterns due to its strong green grab. There is no flash time required, so installation can commence immediately. Rolling is neither required nor recommended. It offers superior flexibility and is designed to keep the flooring in place, yet allow for normal movement during seasonal changes to the flooring.

Pre-Installation Checklist

A successful installation requires proper preparation of the sub floor. Read and understand all applicable guidelines and technical data sheets before beginning installation. Follow industry standards and flooring manufacturer's recommendations for sub floor moisture content, design, layout and application of flooring materials. All slab constructions must meet the specific requirements of the floor covering to be installed.

Sub Floor Examination

Prior to starting, the sub floor must be checked according to NWFA installation guidelines. It must be solid and sound, flat, permanently dry, clean, free of chaps, indentations and anti-adherents, as well as resistant to pressure and tension. Moisture content of all floors must be measured before installation.
Moisture content in concrete sub floors must be below 12#/24h/1,000 sq. ft. using the Calcium Chloride Test or less than 95% using the relative humidity test.
All wood floors should have 6-9% moisture content at installation. There should be no more than a 4-5% variance in moisture content between the wood flooring and any wood sub floor. See NWFA guidelines and the wood flooring manufacturer's recommendations for details.

Sub Floor Preparation

Depending on type and condition of sub floor, a mechanical treatment (e.g. mechanical brushing, grinding or sanding) is required. Intensity of such work must be determined at the site by the installer. Dust, paint, residual adhesives or other surface pollution must be removed by suitable means. We recommend cleaning the surface with an industrial vacuum cleaner. Cracks and gaps must be filled with concrete crack filler unless they are expansion joints. Level when necessary to 3/16 inches within 10 feet. Heated sub floors must be primed.

Installation Procedure

Spread the adhesive with the appropriate notched trowel. Avoid excessive adhesive thickness by passing the trowel evenly through the adhesive at a 45 degree angle. There is no flash time, so installation should begin immediately. Lay the flooring into the adhesive, correctly position it and press down firmly. Rolling is neither required nor recommended. Be sure to check the boards at regular intervals to make certain good adhesive transfer from floor to flooring is accomplished.

Limitations

When using other than Stauf products in combination with Stauf sealers, we deny any and all responsibility for any ensuing problems and/or damages without prior written permission from Stauf.
Do not install solid wood below grade. Do not use on concrete with curing agents or sealers except approved Sealers listed below. Do not use on damp sub floors. Do not install wood flooring with a moisture reading above 9%. Do not use adhesive as a leveling material.
This adhesive will not prevent moisture-related damages to wood flooring where moisture conditions are in excess of limitations outlined in Installation Procedure.
In case of accident, injury, spill or exposure, see MSDS sheet for information. Consult technical data sheet at www.staufusa.com for updated information.

General Features
- contains no isocyanates to etch floors's finish
- contains no water
- contains no chlorinated solvents
- contains no solvents
- contains no VOC
- certified "green"
- certified "very low emission"
- nonflammable
- high solids content
- ozone friendly
- special polymer will not etch floor's finish
- moisture and sound barrier in one step process
- moisture cured for a strong bond
- Freeze/thaw stable

Installation Features
- wet lay - no flash time required
- strong green grab
- non-slump formula
- bridges normal sub floor variations
- eliminates hollow spots
- very low odor
- cleans with acetone or mineral spirits
- no rolling required
- does not cause cupping of wood flooring
- long open time
- spreads easily
- higher temp & RH will shorten drying time

Long Term Features
- resistant against aging
- remains elastic
- sound reduction: STC & IIC @ 72/74 dB
- reduces moisture pressure from 12# to 3#
- suitable for radiant heat systems with primer
- allows normal dimensional changes in wood flooring

Approved Flooring
- Engineered Flooring, 1/4"-3/4", any width
- Strip Flooring, Solid, 5/16"-3/4", up to 3" wide
- Solid Shorts, 1/2" - 3/4", any width
- Solid Planks, 1/2" - 3/4", any width
- Parquet, Engineered, 5/16"
- Parquet, Solid, 5/16"
- Solid Wood Flooring must be straight and flat.
- Bamboo Flooring (except Stranded Bamboo)

Approved Sub Floors
- Concrete
- OSB (underlayment grade)
- Plywood (underlayment grade)
- Particle or Chipboard (underlayment grade)
- Old Floors with adhesive residues, sanded
- Ceramic Tiles
- Stone, Terrazzo
- Cured Leveling Compounds
- Radiant Heated Sub Floors
- Wet Concrete Slab up to 8#/24hrs/1,000SF (85% RH)
- Wet Concrete Slab up to 12#/24hrs/1,000SF (90% RH)

Approved Primers
- Primer is normally not required
- STAUF AQP-200 Eco-Prime

Approved Sealers
- Sealer is normally not required
- STAUF ACS-210 True-Seal
- STAUF ERP-270 Epoxy-Prime

Approved Leveling Compounds
- STAUF FLC-500 Leveling Compound
- STAUF QFP-520 Quick Floor Patch

Approved Underlayments
- STAUF SCU-600 Sound Comfort Underlay
- STAUF SCU-610 Sound Control Underlay

Approved Trowels and Spread Rate
- Trowel #12: up to 35 SF/gal. (Must use 1 trowel per pail)

Cure Time until Normal Traffic
- approx. 48 hours

Clean-Up
- Use acetone or mineral spirits

Temperature Range during Installation
- 50°-90°F

Relative Humidity Range during Installation
- 30% - 80%

Packaging Size
- 3 gal. Plastic Pail
- 3/4 gal. Plastic Pail

111Weight [lbs./gal.]
- 13.7

Color
- Brown

Shelf Life
- 12 Months in original, unopened container

Open Time	30% R/H	50% R/H	80% R/H
50F/10C	2 1/2 hours	2 hours	1 1/2 hours
70F/21C	1 3/4 hours	1 1/4 hours	1 hour
90F/32C	1 hour	50 mins	40 mins

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Ambient Air (Canister) Sample Collection Field Form

Project # 60137361
Project Name METROPOLITAN FORMER MGP
Consultant AECOM
Collector R. PAPAGIAN / J. PFEIFFER

Sample ID AMB-2

Start Date/Time 3/19/2011 – 1650
End Date/Time 3/20/2011 – ~~0050~~ 0105
Canister ID #3428
Flow controller ID #00908

Vacuum gauge "zero" ("Hg) ZERO
Start Pressure ("Hg) +/-30
End Pressure ("Hg) -13
End pressure > "zero"?
Sampling duration (intended) 8 HOURS.

Tubing type used N/A Length of tubing N/A cm Tubing volume N/A cc
Volume purged N/A cc @ N/A min 1 to 3 volumes purged @ < 200cc/min? N/A.

Weather Conditions at Start of Sampling:
Air temperature (°F) ~40°F Rainfall NONE Wind direction N to E
Barometric pressure 30.23" Relative humidity 40 (AVERAGE) Wind speed (mph) ~5mph.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:
TEMPERATURE POSSIBLY DECREASED BETWEEN START AND STOP TIMES.

Site Plan showing sample location, building(s) being sampled, building HVAC inlet, outdoor air sources, wind direction

SEE POH QUESTIONAIRE FLOOR PLAN.

Comments:

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Indoor Air (Canister) Sample Collection Field Form

Project # 60137361 Consultant AECOM

Project Name METROPOLITAN Collector R. PAPAGIAN | J. PFEIFFER

Sample ID IA-4

Vacuum gauge "zero" ("Hg) ZERO

Start Date/Time 3/19/2011 – 1650 Start Pressure ("Hg) +/-30

End Date/Time 3/20/2011 – 0050 End Pressure ("Hg) -3

Canister ID 613 End pressure > "zero"?

Flow controller ID 01165 Sampling duration (intended) 8 HOURS

Associated ambient air sample ID AMB-2 Associated sub-slab vapor sample ID SV-4

Tubing type used N/A Length of tubing N/A cm Tubing volume N/A cc

Volume purged N/A cc @ N/A min 1 to 3 volumes purged @ < 200cc/min? N/A.

Weather Conditions at Start of Sampling:

Air temperature (°F) ~40°F Rainfall NONE Wind direction N TO E

Barometric pressure 30.23" Relative humidity 40 (AVERAGE) Wind speed (mph) ~5 MPH.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

TEMPERATE POSSIBLY DECREASED BETWEEN START AND STOP TIMES (OUTSIDE).

Indoor air temp (°F) 70°F – 75°F Indoor relative humidity (%) UNKNOWN

Building Survey and Chemical Inventory Form Completed? YES Photograph IDs SEE ATTACHED.

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

SEE DOH QUESTIONAIRE FLOOR PLAN.

Comments: AIR TEMPERATURE INSIDE WAREHOUSE AT SAMPLING LOCATION BETWEEN 70°F – 75°F.

nationalgrid **Sub-slab Vapor (Canister) Sample Collection Field Form**

Project # 60137361 Consultant AECOM

Project Name METROPOLITAN. Collector R. PAPAGIANI / J. PFEIFFER.

Sample ID SV-4

Start Date/Time 3/19/2011 - 1650 Vacuum gauge "zero" ("Hg) ZERO

End Date/Time 3/19/2011 - 1100 Start Pressure ("Hg) +/-30

Canister ID 1624 End Pressure ("Hg) -3

Flow controller ID 00917 End pressure > "zero"?

Associated indoor air sample ID IA-4 Sampling duration (intended) 8 HOURS

Associated ambient air sample ID AMB-2

Tubing type used 1/4" OD Length of tubing 3' ~~cm~~ Tubing volume _____ cc

Volume purged 2 L ~~cc~~ @ 10 min 1 to 3 volumes purged @ < 200cc/min? YES

Weather Conditions at Start of Sampling:

Air temperature (°F) 40°F Rainfall NONE Wind direction N to E

Barometric pressure 30.23" Wind speed (mph) ~5mph.

Substantial changes in weather conditions during sampling or over the past 24 to 48 hrs:

Indoor air temp (°F) 70°F - 75°F Indoor relative humidity (%) UNKNOWN

Building Survey and Chemical Inventory Form Completed? YES Photograph IDs SEE ATTACHED.

Floor Plan showing sample location, HVAC equipment, indoor air sources, preferential pathways

SEE DOH QUESTIONAIRE FLOOR PLAN.

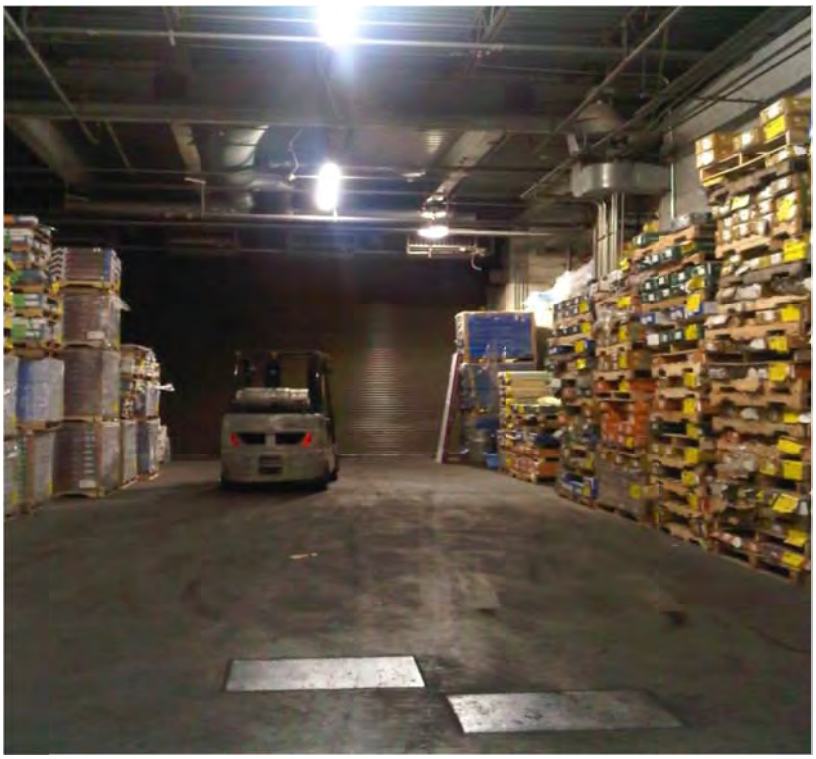
Comments: Helium tracer gas 90% in shroud, 5% in tube (PASS)
Use Non voc plumbers putty to affix shroud to floor.

Site Photographs SV-4, IA-4, and AMB-2

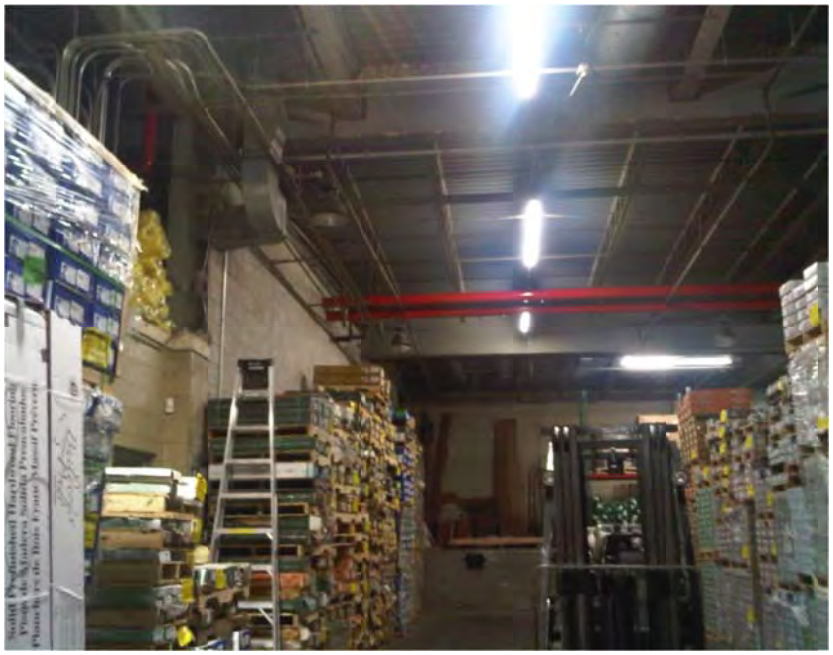
SV-4 and IA-4 Samples

AMB-2 Sample

Site Photographs SV-4, IA-4, and AMB-2 (continued)



Eastern area of warehouse – note the metal plates on floor and ceiling height heaters that are not functional (facing northeast)



Eastern area of warehouse – note the recently painted (red) sprinkler lines at ceiling height (facing southwest)

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name: Rita Papagian/Jennifer Pfeiffer **Date/Time Prepared:** March 19, 2011

Preparer's Affiliation: AECOM Environmental **Phone No:** (845)425-4980/(212)798-8500

Purpose of Investigation: Investigate the potential for MGP residuals to adversely affect indoor air.

1. OCCUPANT: (BUSINESS – Lumber Liquidators)

Interviewed: (Y) / N

Last Name: Bartley First Name: Dwayne

Address: 64 12th Street, Brooklyn, New York

County: Kings

Home Phone: N/A Office Phone: (347)756-4215

Number of Occupants/persons at this location: 1 Age of Occupants: N/A

2. OWNER OR LANDLORD: (Check if same as occupant) Owner : Milea

Interviewed: Y /(N)

Last Name: Milea First Name: Robert

Address: 64 12th Street, Brooklyn, New York

County: Kings

Home Phone: N/A Office Phone: not available

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other:

Note: The building is occupied by a Path Mart grocery store.

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	~~Townhouses~~/Condos
Modular	Log Home	**Other:** Office/warehouse, partial second story offices.

If multiple units, how many? NA

If the property is commercial, type? Yes

Business Type(s): Lumber Liquidators – Lumber Warehouse

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? N/A

Other characteristics:

Number of floors: 2 Building age: Unknown

Is the building insulated? Y / (N) How air tight? Tight / (Average / Not Tight)

Note: The warehouse/storage area where IA2 and SV2 were taken was not insulated.

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow pattern and qualitatively describe:

Airflow between floors: There is metal construction between the warehouse and the partial second floor office space.

Airflow near source: The air is from the west side of the warehouse to the east due to only one ceiling height heater unit blowing to the east side of the warehouse. The ceiling height heaters on the eastern side of the warehouse are not functional and haven't been in use for some time. There is no known source material.

Outdoor air infiltration: The SV/IA sampling was conducted when the store was closed, so the bay doors were closed during the sampling event. An office door to the warehouse remained closed during the sampling, except when exiting the warehouse to the office space. There was a door from the office to the outside that remained closed during the sampling, except when exiting the store.

There are two large ceiling height bay doors to the warehouse/storage area from the outside. The are large gaps in the door ways allowing for outside infiltration.

Infiltration into air ducts: Air ducts observed were from the heating units to the ceiling (exhaust).

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick	(Cinder block)
b. Basement type:	full	crawlspace	(slab)	other: First floor at grade.	
c. Basement floor:	(concrete)	dirt	stone	other: First floor at grade.	
d. Basement floor:	(uncovered)	covered	covered with:	First floor at grade.	
e. Concrete floor:	(unsealed)	sealed	sealed with:		
f. Foundation walls:	poured	(block)	stone	other:	
g. Foundation walls:	unsealed	(sealed)	sealed with: paint		
h. The basement is:	wet	damp	(dry)	moldy: First floor at grade.	
i. The basement is:	finished	(unfinished)	partly finished: First floor at grade.		
j. Sump present?	Y / (N)				
k. Water in sump?	Y / N / (not applicable)				

Basement/Lowest level depth below grade: Not known

Identify potential soil vapor entry points and approximate size. (e.g., cracks, utility ports, drains)
There was a small crack near the SV-4/IA-4 location. There were not any drains or utility ports observed near the sampling areas. There were multiple metal plates covering the floor area in the main warehouse area (eastern half of building). It was unknown what they were for and only one was identified as covering a depression in the concrete created from the previous occupant and was covered up for the current occupant. All but one of these plates was observed in front of the ramp/loading dock area and the one was observed just west of the ramp/loading dock area.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

(Hot air circulation)	Heat pump	Hot water baseboard	
(Space Heaters)	Stream radiation	Radiant floor	
Electric baseboard	Wood Stove	Outdoor wood boiler	Other:

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by:

Boiler/furnace located in: Basement Outdoor Main Floor (Other: Not observed.)

Air conditioning: Central Air (Window units) Open Windows None

Comment: A window unit observed in the office area. There was no air conditioning units observed in the warehouse space.

Are there air distribution ducts present? Y / (N)

Describe the supply and air return ductwork, and its condition where visible, including whether There is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram,

7. OCCUPANCY

Is basement /lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement: The lowest level is occupied by shoppers and workers during business hours (varies by day of the week), and occupied by workers during off hours.

1st Floor: (see above)

2nd Floor: Offices are occupied by workers during business hours. Hours of operation are unknown. Public or shoppers are unknown.

3rd Floor: Not present.

4th Floor: Not present.

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage? (e.g., lawnmower, atv, car) Y / (N) / NA Please specify

Note: A propane powered fork lift is used in the warehouse/storage area.

d. Has the building ever had a fire? Y / (N) When?

e. Is a kerosene or unvented gas space heater present? Y / (N) Where?

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type?

g. Is there smoking in the building? Y / (N) How frequently?

h. Have cleaning products been used recently? Y / (N) When & Type?

i. Have cosmetic products been used recently? Y / (N) When & Type?

j. Has painting/staining been done in the last 6 months? (Y) / N Where & When?
Sprinker water lines painted in the warehouse area approximately 2-3 weeks prior to sampling event.

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When?

l. Have air fresheners been used recently? Y / (N) When & Type? Unknown.

m. Is there a kitchen exhaust fan? Y / (N) If yes, where vented?

n. Is there a bathroom exhaust fan? Y / (N) If yes, where vented?

o. Is there a clothes dryer? Y / (N) If yes, is it vented outside?

p. Has there been a pesticide application? Y / (N) When & Type? Unknown.

Are there odors in the building? Y / (N)
If yes, please describe:

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? N/A

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) (Unknown)
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation:
Is the system active or passive? Active / Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other:

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: Not recommended

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel**:** (NA)

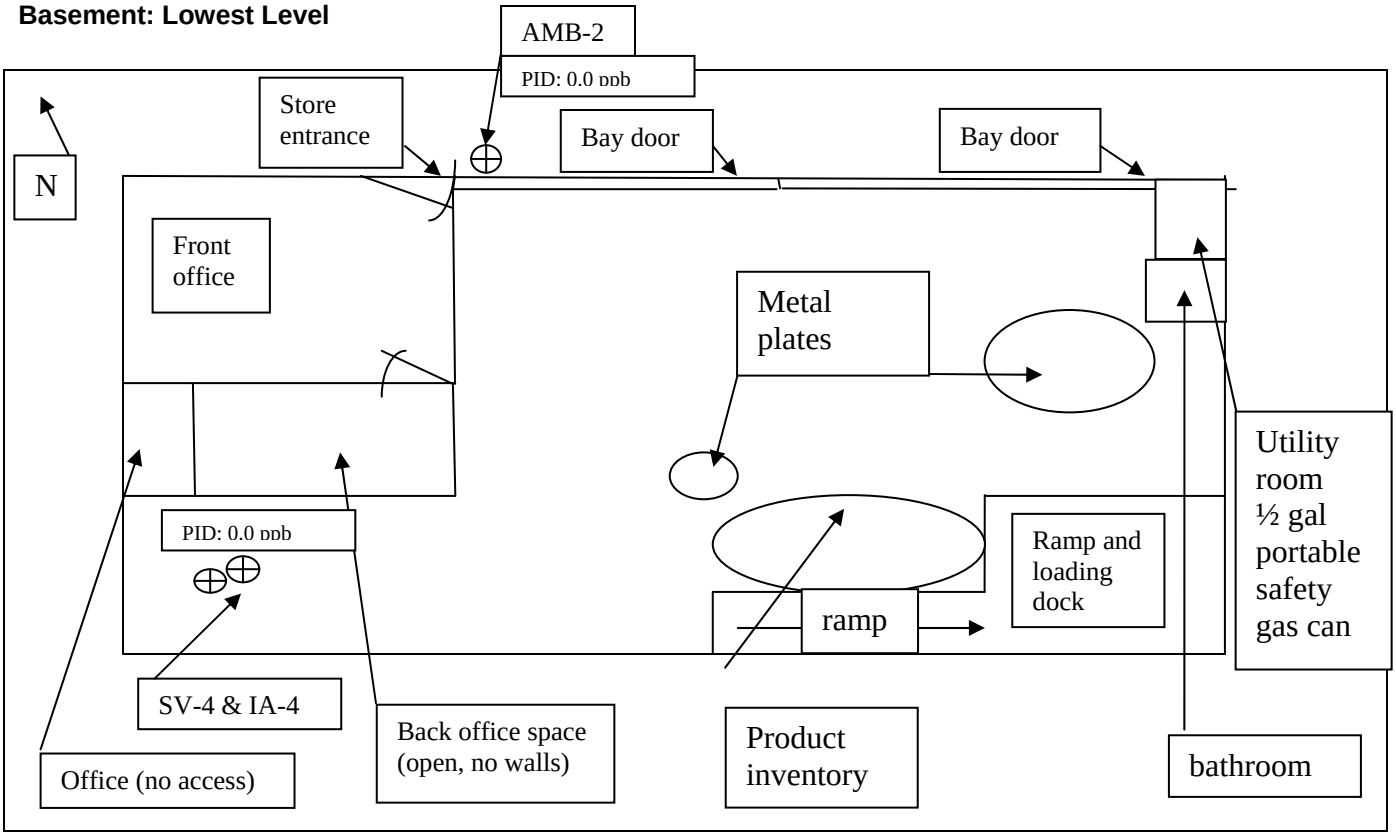
c. Responsibility for costs associated with reimbursement explained? Y / N (NA)

d. Relocation package provided and explained to residents? Y / N / (NA)

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources, and PID meter readings. If the building does not have a basement, please note.

Basement: Lowest Level

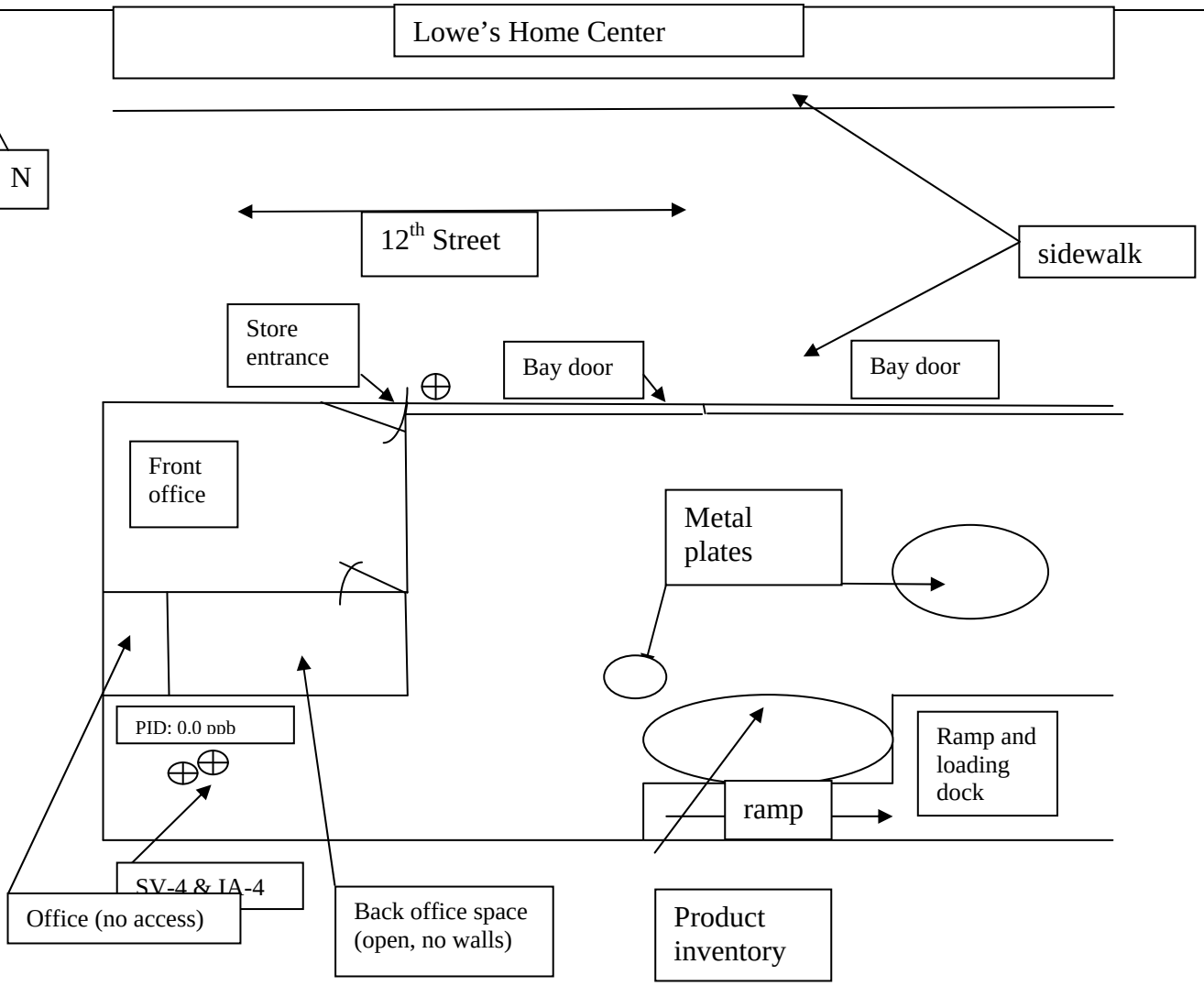


First Floor: Not applicable

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being samples. If applicable, provide information on spill locations, potential air contamination sources (industrial, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s), and PID meter readings.

Also indicate compass direction, wind direction, and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



- Former MGP structures and spill previously to the west and northeast
- Spill previously at NYC Sanitation department to the east-northeast
- Spill previously at 60 12th Street to the west.

Wind: West to East at ~5 mph

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rea 2000, PPB Rea

List specific products found in the residence that have the potential to affect indoor air quality

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Readings (units)	Photo** Y/N
Warehouse	Moisture Control wood flooring adhesive	5-gal (77)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Plantsea WFM	5-gal (56)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Wood flooring adhesive – urethane	5-gal (8)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Urethane engineered wood flooring adhesive	5-gal (13)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Bellawood – floor cleaner	1 qt (84)	Good	See photo and MSDS	0.0 ppb	Y
Warehouse	Adhesive remover – urethane cleaner	1 qt (8)	Good	See photo and MSDS	0.0 ppb	Y
Back office space (warehouse)	Floating Floor tongue and grove adhesive	1 pt (1)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	ECO 980 – adhesive urethane	5 gal (4)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Ultrabond urethane cleaner	1 qt (9)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Ultabond urethane wipes	1 qt (28)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Parabond adhesive vinyl back floor covering	1 gal (1)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Floating floor tongue and grove adhesive	1 qt (9)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bostik's best – wood flooring urethane adhesive	10.1 oz (13)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Cal floor scratch away – spray	12 oz (11)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bostik's adhesive remover	32 oz (10)	Good	See photo and MSDS	0.0 ppb	Y
Front Office	Bella wood – hardwood floor adhesive spray	32 oz (50)	Good	See photo and MSDS	0.0 ppb	Y

*Describe the conditions of the product containers as **Unopened (UO),** or **Deteriorated (D)**

Photographs of the **front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredients labels must be legible.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name	**G65639**
MSDS name	ULTIMATE TOWELS 6 TUB/CS
CAS number	Mixture
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous component(s)	CAS #	Percent
Dimethyl adipate	627-93-0	9 - 18
Dimethyl glutarate	1119-40-0	28 - 35
D-Limonene	5989-27-5	1 - 3

3. HAZARDS IDENTIFICATION

Emergency overview This product is irritating to the eyes and skin. Will cause redness and/or swelling. Will bond skin rapidly and strongly.

Potential health effects

Skin This product may cause irritation, redness and/or swelling to the skin. Product will immediately bond skin to skin.

Eyes This product may cause irritation to the eyes. Product can bond to eyelids, sealing eyes shut.

Inhalation Vapor overexposure may cause irritation.

Ingestion No hazard known at this time.

Target organs None known for product as a whole.

4. FIRST AID MEASURES

First aid

Skin For skin contact, wash immediately with soap and water. Immerse bonded area in warm soapy water. Carefully peel or roll surface apart with the aid of a blunt edge. DO NOT pull apart with direct opposing action. If irritation persists, get medical attention.

Eye Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately. See Notes to Physician.

Inhalation Remove to fresh air. Call a physician if symptoms develop or persist.

Ingestion If ingested, the adhesive will solidify and adhere to the mouth almost instantly. Saliva will lift the adhesive in 1-2 days. The cured adhesive should not be swallowed.

Notes to physician Treat symptomatically and supportively. If the eye is bonded shut, flush with warm water, and apply patch. Eye will open in 1-4 days.

5. FIRE FIGHTING MEASURES

Hazardous combustion products Irritating and toxic gases or fumes may be released during a fire.

Extinguishing media Use dry chemical, carbon dioxide, or foam. Water spray (fog).

Dust explosion hazard None Known

Sensitivity to mechanical impact None Known

Sensitivity to static discharge None Known

Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Flash point	> 200 °F (> 93.3 °C)

6. ACCIDENTAL RELEASE MEASURES

Emergency action	Appropriate safety measures and protective equipment should be used. See Section 8. Do not discharge to lakes, streams, ponds, or sewers. Dispose of in compliance with local, state, and federal regulations.
Spill or leak procedure	Flood with water to polymerize. Soak up with absorbent material. Thoroughly clean area where spill occurred.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. HANDLING & STORAGE

Handling	Use this product with adequate ventilation. Avoid getting this material into contact with your skin and eyes.
Storage	Store this product in air-tight containers away from sources of heat and light. Cool location should be 60-80 degrees F or 15-30 degrees C.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Use local exhaust or general ventilation where the potential exists to exceed the PEL or TLV exposure limits.
Eye protection	Wear goggles or safety glasses with side shields.
Skin and body protection	Impervious gloves should be used at all times when handling this product. Recommended gloves include rubber, neoprene, nitrile or viton.
Respiratory protection	If ventilation is not sufficient to effectively prevent buildup of vapors, appropriate NIOSH/MSHA respiratory protection must be provided

9. PHYSICAL & CHEMICAL PROPERTIES

Target solids	50 - 60 %
Density	1 g/cc
Odor	Sweet
Physical state	Paper Coating
Freeze protect	No

10. STABILITY & REACTIVITY

Hazardous reactions/decomposition products	None known.
Hazardous polymerization	Will not occur.
Conditions to avoid	Polymerized by contact with water, alcohols, amines, alkalies.
Stability	This is a stable material.

11. TOXICOLOGICAL INFORMATION

Toxicological data If any toxicological data is available, it will be listed below:

LD50

Toxicology Data - Selected LD50s and LC50s

D-Limonene	5989-27-5	Oral LD50 Rat: 4400 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Carcinogenicity If this product contains any carcinogens, they will be noted below:

12. ECOLOGICAL INFORMATION

Ecotoxicological information No data available for this product.

13. DISPOSAL CONSIDERATIONS

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. When intending to dispose of this material, the user is advised that this product would not be classified as a Hazardous Waste under U.S. Federal Regulations in effect at the time this MSDS was created.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

State regulations If this product contains any ingredients listed under California Proposition 65, they will be noted below:

International regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

This product is considered to be an article and as such is exempt from the requirements of the Canadian Domestic Substance List (DSL).

HMIS Ratings
Health: 1
Flammability: 1
Physical hazard: 0
Personal protection: X

SARA 311/312 HAZARD CATEGORIES
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

WHMIS status Controlled

WHMIS labeling

WHMIS classification D2B - Other Toxic Effects-TOXIC

16. OTHER INFORMATION

Disclaimer The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Issue date 09-FEB-07

Prepared by Richard Sontag

Supercedes 09-FEB-07

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	**BST Urethanes**
MSDS name	BST Urethane Series
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Generic description	Polyurethane Sealant
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. Hazards Identification

Emergency overview

Contact with this material can cause irritation to the skin, eyes and mucous membranes. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water. Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.

Potential health effects

Eyes

This product may cause irritation to the eyes. May cause temporary corneal injury.

Skin

This product may cause irritation to the skin. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.

Inhalation

This product may cause irritation to the respiratory system. Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.

Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Target organs

The lungs and skin may be targeted and damaged by components of this product.

Signs and symptoms

Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, sore throat, eye irritation, skin irritation and/or diarrhea.

Hazard statements

This product contains Methylene Diphenyl Isocyanate (MDI) which is a potential skin sensitizer and has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity. Risk to your health depends on duration and concentration of exposure.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Stoddard solvent	8052-41-3	3 - 7
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact flush with large amounts of water while removing contaminated clothing. If skin irritation persists, call a physician. For severe exposure, immediately get under a safety shower and begin rinsing.
Inhalation	If inhaled, immediately remove the affected person to fresh air. Call a physician if symptoms develop or persist. Administer oxygen or artificial respiration as needed.
Ingestion	If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting without medical advice. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Notes to physician	Provide general supportive measures and treat symptomatically. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

5. Fire Fighting Measures

Hazardous combustion products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
Extinguishing media	
Suitable extinguishing media	Dry chemical, foam, carbon dioxide, water fog.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
Flash point	142 °F (61.1 °C)

6. Accidental Release Measures

Emergency action	Wear appropriate personal protective equipment. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provencial regulations for disposal. Regulations vary. Consult local authorities before disposal.
Spill or leak procedure	Scrape up material and place in steel drums that are in good condition. Thoroughly clean area where spill occurred. Remove sources of ignition. Ventilate area of spill.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Liquid spills: Cover spills with absorbent clay or sawdust and collect material in open container and neutralize with a solution containing 2% liquid detergent, 3% concentrated ammonium hydroxide and 95% water. Wash spill area clean with the neutralization solution. Remove container to a safe place, cover loosely and allow to stand for 24 to 48 hours letting evolved carbon dioxide escape. Collect and contain for disposal. Pellet or chip spill: Collect and contain for salvage or disposal. Molten adhesive spill: Placard hot material, allow to cool and remove. If material is not cured once cooled, follow neutralization directions for liquids listed above. Collect and contain for disposal.

Reporting See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

Handling Do not get this material in your eyes, on your skin, or on your clothing. Wash hands after handling and before eating. Do not breathe gas/fumes/vapor/spray. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.

Storage Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep away from direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition.

Empty container precaution Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Explosion proof exhaust ventilation should be used.

Personal protective equipment

Eye protection Wear safety glasses with side shields.

Skin and body protection Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Respiratory protection Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

General Eyewash fountains and emergency showers should be readily available.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE (MDI) 0.005 PPM
Stoddard solvent	8052-41-3	STODDARD SOLVENT 100 PPM

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENE BISPHENYL ISOCYANATE 0.2 MGM3 - 0.020 PPM 10-min
Stoddard solvent	8052-41-3	STODDARD SOLVENT 1800 MGM3 15-min

US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Stoddard solvent	8052-41-3	STODDARD SOLVENT 525 MGM3 - 100 PPM

9. Physical & Chemical Properties

Target solids	95.4 %
Density	1.508 g/cc
Odor	Solvent
Color	Amber
Physical state	Paste
Freeze protect	No
VOC (Volatile Organic Compounds)	72 g/l

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.

Hazardous polymerization Hazardous polymerization can occur with elevated temperatures or contact with water.

Conditions to avoid Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides. Keep away from sources of ignition.

Stability This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

11. Toxicological Information

Carcinogenicity If this product contains any carcinogens, they will be noted below: This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

Local effects Single large does, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases. Chronic exposure may cause lung damage, including fibrosis and decreased lung function, which may be permanent.

12. Ecological Information

Ecotoxicological information Organic solvents produce slight to moderate toxicity to aquatic life.

13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

14. Transport Information

DOT

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

The product(s) covered by this M(SDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010 and the list of 8 substances proposed on December 15, 2010.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Methylene Diphenyl Isocyanate (MDI)	101-68-8	METHYLENEBIS(PHENYLISOCYANATE) (MDI) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

State regulations	If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below: Butyl Benzyl Phthalate (BBP) Di-Isodecyl Phthalate (DIDP) Naphthalene
International regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
HMIS Ratings	Health: 2* Flammability: 2 Physical hazard: 0 Personal protection: X
SARA 311/312 HAZARD CATEGORIES	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
WHMIS status	Controlled
WHMIS labeling	

WHMIS classification	D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC

16. Other Information

Product name(s) covered	G62130 - BST URETHANE G62140 - BST URETHANE
Disclaimer	The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.
Further information	If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.
Issue date	03/07/2011
Prepared by	Bostik, Inc. Regulatory Affairs
Supercedes	03/03/2011

ScratchAway Medical Safety Data Sheet (MSDS)

MSDS SC-92241

Material Safety Data Sheet
complies with OSHA's hazard communications Standard (20CFR 1910.1200)

Section 1. Product Identification

Name	ScratchAway	Type:	Aerosol
Container Size:	13oz Net Weight	Information Phone:	Cal-Flor A.S.
Stock Number:	SC-92241		(530) 534-3567
Supplier's Name:	Cal-Flor Accessory Systems		1-888-227-3567
Address:	1000 Cal Oak Road, Oroville CA, 95965		

DOT SHIPPING INFORMATION

DOT SHIPPING NAME:	Consumer Commodity
DOT HAZARD LEVEL CLASS:	ORM-D
DOT LABEL:	None
DOT PACKAGING GROUP:	None

HAZARDS RATING INFORMATION

	NFPA	NPAC(HMIS)	
Health:	1	1	0- Minimal
Flammability:	4	1	1- Slight
Reactivity:	0	0	2- Moderate
Personal Protection:	N/A	None	3- Serious
Code 30b Storage Rating:	Level 1		4- Extreme

Section 2. Ingredients

Chemical Name:	CAS NO.	% WT	313 Chemical	OSHA PEL	ACGIH/TLV
Isoparaffins	64742-47-8	<10.0	No	500 ppm, 2000 mg/m3, 8 hr TWA	N/E
Water	7732-18-5	<10.0	No	N/E	N/E
Petroleum Lubricating Oil	64742-65-0 or 64742-54-7	<10.0	No	5 mg/m3 (oil mist)	10mg/m3 (oil mist)
Isobutene/ Propane Blend	68476-86-8	<20.0	No	1000 ppm	N/D
Polyglyceryl-4-Oleate	9007-48-1	<5.0	No	Health Hazard	Eye irritant

All ingredients used in this mixture are listed on the TSCA Inventory List and none is listed as carcinogenic by OSHA, IARC, or NTP.

Section 3. Physical DATA

Boiling Point:	N/D
Vapor Pressure:	46-56 PGSI @ 70* F
Solubility in Water:	Slightly Soluble
pH:	7.2
Specific Gravity:	.939 g/ml
Evaporation Rate:	less than 1 (h20 =1)
Appearance/Odor:	Off-white emulsion with lemon fragrance, Pressurized
VOC Content:	8.0% - 10.0% VOC

Section 4. Fire and Explosion Data

Flash Point:	<-20*f By Tag Closed Cup
Explosive Hazard	Not an Explosive
Extinguishing Media:	Water Fog, Foam, Carbon Dioxide, Dry Chemical
Special Fire Fighting Procedures:	None Known
Unusual Fire and Explosion Hazards:	Prolonged Exposure to Temperature Above 130 *F May Cause Cans To Burst

Section 5. Reactivity Data

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Hazardous Decomposition Products:	CO, CO2, Ammonia, Nitrogen Oxides.
Incompatibility:	None Known

Section 6. Storage and Handling

KEEP OUT OF REACH OF CHILDREN

Store in a cool dry area away from heat and open flame.

Do not store at temperatures above 120*F or below 32*F

Section 7. Health Effects and First Aid

PRIMARY ROUTES OF ENTRY AND EFFECTS OF OVEREXPOSURE

Eyes: May cause mild irritation in some individuals

Skin: May cause mild irritation in some individuals

Inhalation: Breathing of vapor may produce feelings of euphoria and anesthetic effects. Over-exposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on time of exposure and concentration.

First Aid Procedures

Eyes: Flush eyes with plenty of water for at least 15 minutes. Contact a physician if irritation persists.

Skin: Wash with soap and large quantities of water. Contact a physician if irritation persists.

Inhalation: Remove person to fresh air. Contact physician if effects are persistent

Ingestion: DO NOT induce vomiting, contact a physician immediately

Section 8. Special Protection Information

RESPIRATORY PROTECTION: Not normally needed.

VENTILATION: Mechanical (general) ventilation not required under normal conditions

PROTECTIVE GLOVES: Not normally needed.

EYE PROTECTION: Not normally needed.

Section 9. Spill or Leak Precautions

STEPS TO BE TAKEN IN CASE OF SPILLAGE OR LEAKAGE:

Spilled material can be picked up with absorbent material.

Use caution where surfaces may become slippery from spilled material.

WASTE DISPOSAL METHOD:

Sweep up and place in and empty container and close.

Dispose of according to local, state and federal regulations.

WASTE DISPOSAL CAUTIONS:

Hazardous substances cleaned with this product may create hazardous waste that must be properly characterized and disposed of in accordance with RCRA, state and local regulations.

N/A = not applicable N/E = not established N/D = not determined < = less than > = more than

Date Prepared 5/13/2004

MAPEI®

Ultrabond® 980 Solvent-Free

Urethane wood flooring adhesive

DESCRIPTION

Ultrabond 980 is an innovative, solvent-free, one-part, moisture-curing urethane adhesive specifically designed for easy application and high performance.

- Nonslump/trowel-ridge-holding formulation
- Superior application properties
- Contains no solvents or water
- Low in VOCs
- Economical
- Elastomeric to allow the natural subtle movements of wood flooring

USES

- Use to install prefinished or unfinished engineered wood plank.
- Use to install solid hardwood planks (flat milled) or shorts.
- Use to install prefinished or unfinished parquet.
- Use to install acrylic impregnated wood and laminated plank.
- Use to install ceramic tile (residential and light commercial only).

RECOMMENDED SUBSTRATES

- Fully cured concrete

  Note: All concrete slabs should be tested for moisture. If moisture vapor emission exceeds 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m^2) per 24 hours, using the anhydrous calcium chloride test (ASTM F1869), this adhesive must not be used.
- Any wood underlayment such as exterior-grade plywood, Group 1, CC type, that is recommended or guaranteed by either the wood underlayment manufacturer or the wood flooring manufacturer
- Properly prepared cement terrazzo
- Properly prepared ceramic tile

TECHNICAL NOTES

- For interior installations only
- Do not use when the substrate temperature is below 50°F (10°C) or above 100°F (38°C).
- Follow wood manufacturer's instructions regarding proper conditioning of floor-covering materials. Do not use this adhesive to install any type of wood flooring that the wood manufacturer does not recommend to be "glued" down.
- Do not use adhesive as a leveling or patching material. If patching or leveling of a floor is required prior to the application of this adhesive, use the appropriate MAPEI leveling or patching material. Consult MAPEI's Technical Services Department for product recommendations.

Ultrabond 980

- Do not leave unused adhesive in an open container. Cover with dense, nonporous plastic and close lid tightly.
- Immediately clean adhesive from the wood flooring surface with a clean white rag and mineral spirits. Ensure that the mineral spirits does not harm the wood flooring surface.
- *Ultrabond 980* may be used over radiant-heated flooring systems. Understand the effect of these types of systems on wood and ensure that the manufacturer recommends their product be installed over radiant-heated flooring systems.

Note: Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

INSTRUCTIONS

1. Surface Preparation

All substrates must be structurally sound, flat (within 3/16" in 10', or 1/8" in 6' [4,5 mm in 3,05 m, or 3 mm in 1,83 m]), dry, clean and free of dips, holes, voids, dust, oil, grease, tar, paint, wax, curing agents, primers, sealers and any substance that may prevent or reduce adhesion. See "Surface Preparation Requirements" document for additional details.

2. Mixing

Ultrabond 980 is ready to use. No mixing is required. Simply open the container and spread.

3. Application

3.1 Refer to wood flooring manufacturer's instructions and industry standards regarding job site, surface preparation, material conditioning and installation.

3.2 All wood flooring, adhesive and subfloor should be maintained at room temperature (73°F [23°C]) for a period of 48 hours before, during and after the installation.

3.3 Use the typical trowel (see "Technical Data") to ensure that adhesive covers at least 95% of the flooring backing. Follow the wood flooring manufacturer's recommendation regarding proper trowel to use.

3.4 Spread adhesive may be installed into using a wet-lay or walk-on method.

Note: Secure starter row by wedging or face-nailing.

3.5 After placing, press the wood flooring firmly into the adhesive to ensure good contact with the adhesive.

3.6 Proper adhesive transfer to the backing should be confirmed periodically by lifting the material.

3.7 Leave an appropriate space around the perimeter of the room and stationary objects to allow for wood flooring expansion as recommended by the wood flooring manufacturer.

3.8 Carefully roll the wood flooring installation with a roller as specified by the flooring manufacturer. Apply weight to flooring as necessary to ensure proper contact while adhesive is curing.

3.9 Complete the installation per the flooring manufacturer's recommendations.

3.10 Promptly clean adhesive smudges with mineral spirits while still fresh. Ensure that the finished surface of flooring is not harmed. Adhesive is extremely difficult to remove once cured.

3.11 Clean all tools with mineral spirits before the adhesive sets.

4. Expansion and Control Joints

4.1 Provide for expansion and control joints where specified.

4.2 Do not cover any expansion joints with adhesive.

4.3 Cut wood flooring on both sides along the edges of expansion joints.

4.4 Insert the specified compressible bead and sealant for expansion and control joints, according to plans and specifications.

5. Protection

5.1 Protect containers from freezing in transit and storage.

5.2 Provide heated storage (at a temperature not lower than 73°F [23°C]) on site and deliver all materials at least 24 hours before work begins.

5.3 Light traffic is acceptable in 8 to 12 hours. Adhesive is fully cured in 24 hours.

5.4 To reseal container, fully cover adhesive with plastic and then tightly reseal the lid.

TECHNICAL DATA

Service temperature . . . . . -40°F (-40°C) to 150°F (66°C)

Application temperature . . . . . 50°F (10°C) to 100°F (38°C)

Temperature	Relative Humidity	Open Time
73°F (23°C)	50%	2 hours, 30 minutes
50°F (10°C)	80%	3 hours, 30 minutes
100°F (38°C)	20%	4 hours, 15 minutes

Flash point . . . . . > 200°F (> 93°C)

Maximum moisture vapor emission of the concrete (ASTM F1869) . . . . . 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m^2) per 24 hours

Setting time (cure) . . . . . Ready for light foot traffic in 8 to 12 hours, and heavier traffic once cured. Temperature and humidity will affect the cure rate; the higher the temperature and humidity, the faster the cure. Typically this adhesive cures in 24 hours at 73°F (23°C) and 40% relative humidity.

Cleanability . . . . . With mineral spirits when fresh; extremely difficult when cured

Color . . . . . Beige

Consistency . . . . . Creamy and easy to spread

VOC . . . . . 100 g/L

Weight . . . . . 13.9 lbs. per U.S. gal. (1,6 kg per L)

Shelf life . . . . . 12 months when stored in original unopened container at room temperature (73°F [23°C]) in a dry area

Health and safety . . . . . Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

PACKAGING

Pails: 3.5 U.S. gals. (13,2 L); 5 U.S. gals. (18,9 L)

TYPICAL TROWELS AND APPROXIMATE COVERAGES*

3- or 5-ply engineered plank (< 1/2" [12 mm])

5/32" x 3/16" (4 x 4,5 mm) . . . . . 45 to 55 sq. ft./U.S. gal. (1,10 to 1,35 m^2/L)

Engineered plank (> 1/2" [12 mm])

1/8" x 1/4" x 1/4" (3 x 6 x 6 mm) . . . . . 35 to 45 sq. ft./U.S. gal. (0,85 to 1,10 m^2/L)

3- or 5-ply laminated plank

1/4" x 3/16" x 1/2" (6 x 4,5 x 12 mm) . . . . . 55 to 65 sq. ft./U.S. gal. (1,35 to 1,59 m^2/L)

Finger block parquet

1/8" x 1/8" x 1/8" (3 x 3 x 3 mm) . . . . . 70 to 80 sq. ft./U.S. gal. (1,71 to 1,96 m^2/L)

Solid plank (up to 3/8" [10 mm])

1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) . . . . . 30 to 40 sq. ft./U.S. gal. (0,73 to 0,98 m^2/L)

** Trowel dimensions are depth/width/space. Quantities shown are approximate and given for estimating purposes only. Actual job-site coverages may vary according to substrate conditions and size of trowel used.*

Ultrabond 980

NOTICE

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. Any claim shall be deemed waived unless made in writing to us within fifteen (15) days from date it was, or reasonably should have been, discovered.

MAPEI

Headquarters of the Americas

1144 East Newport Center Drive
Deerfield Beach, Florida 33442
Phone: (954) 246-8888
Fax: (954) 246-8800

Customer Service

1-800-42-MAPEI (1-800-426-2734)

Technical Services

1-800-992-6273 (U.S. and Puerto Rico)

1-800-361-9309 (Canada)

Additional Information

Website: www.mapei.com

MAPEI – USA

Ft. Lauderdale, Florida
Fredericksburg, Virginia
Garland, Texas
San Bernardino, California
South River, New Jersey
Tempe, Arizona
West Chicago, Illinois

MAPEI – Canada

Laval, Quebec
Delta, British Columbia
Brampton, Ontario

MAPEI – Argentina

Buenos Aires

MAPEI – Puerto Rico

Dorado

MAPEI – Venezuela

Caracas

MAPEI®

For the most current product data, visit www.mapei.com.

PR4860 980D_H05Evp

Version: Aug. 11, 2009

MAPEI®

Planiseal WFM™

Premium One-Part, Urethane Wood-Flooring Membrane

GREEN INNOVATION

DESCRIPTION

Planiseal WFM is a one-component, ready-to-use moisture-curing urethane membrane designed to protect glue-down wood-flooring installations from subfloor moisture damage. *Planiseal WFM*'s special formula regulates dryness by controlling the release of moisture vapor transmissions coming through the subfloor. With its superior elasticity and tenacious bond, *Planiseal WFM* can accommodate nonstructural in-plane cracks up to 1/8" (3 mm). It also reduces sound transmissions in wood installations in multi-story construction. Plus, *Planiseal WFM* has been designed to work perfectly in conjunction with *Ultrabond 975*, *Ultrabond 980* and *Ultrabond 990* wood-flooring adhesives.

FEATURES AND BENEFITS

- One-component
- Protects glue-down wood-flooring installations from damage caused by moisture vapor emissions coming from the substrate
- Prevents cracks transferring from the substrate to the finished floor in glue-down wood-flooring installations
- Reduces airborne sounds and impact noise through the finished flooring

INDUSTRY STANDARDS AND APPROVALS

LEED Points Contribution	LEED Points
Low-emitting materials	1 point

Refer to MAPEI's Material Safety Data Sheet (MSDS) for specific data related to VOCs, health and safety, and handling of product.

WHERE TO USE

- Use as a moisture membrane, crack-reduction membrane and sound-reduction membrane.
- Interior residential (rental apartments, condominiums, homes)
- Interior light commercial (general office areas, small retail stores)
- Interior commercial (office buildings, hotel rooms and hallways, restaurant dining areas)

LIMITATIONS

- Do not install over any substrates containing asbestos.
- For interior installations only
- Not recommended for flooring designed for nail-down installations only
- Do not apply over any adhesive residues, including cutback adhesive.
- Do not use *Planiseal WFM* in buildings prone to hydrostatic head (pressure).
- Use only when the substrate temperature is between 50°F and 90°F (10°C and 32°C), and when the ambient relative humidity is between 20% and 80%.

SUITABLE SUBSTRATES

- Exterior-grade plywood, Group 1, CC type
- Other approved wood underlayments (per manufacturer recommendations)
- Concrete and properly prepared cement terrazzo
- Existing and properly prepared ceramic tile

Planiseal™ WFM

- Cement-based *Mapecem® Quickpatch* and *Planipatch®* (mixed with water only)
- Cement-based self-leveling underlayments and patching compounds
- Properly prepared and primed gypsum underlayments that meet the ASTM F2419 requirements for compressive strength
- Radiant-heat systems that have been properly installed

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates must be structurally sound, dry, solid and stable.
- Substrate should be clean and free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles, old adhesive residues, and any other substance or condition that may prevent or reduce adhesion.
- Substrates must be flat to 3/16" in a 10-ft. span (4,5 mm in a 3,05-meter span). Refer to wood-flooring manufacturer's guidelines. Use MAPEI's cement-based *Mapecem Quickpatch* to fill holes, level and smooth as needed over concrete.
- Use anhydrous calcium chloride tests to determine the MVER according to ASTM F1869.
- Use a moisture meter to check the relative humidity of the wood flooring, substrate surface and general jobsite area. Follow the flooring manufacturer's guidelines.
- Refer to MAPEI's Surface Preparation Requirements document for floor-covering installation systems at www.mapei.com.

MIXING

- Ready to use; no mixing necessary

Note: Choose all appropriate safety equipment before use. Refer to MSDS for more information.

PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. Select the appropriate notched trowel (see "Approximate Product Coverage" section)
3. Pour *Planiseal WFM* onto the subfloor surface.
4. Immediately spread material with the V-notched side of a 5/32" x 3/16" (4 x 4,5 mm) trowel for a thin, even coat of *Planiseal WFM*, creating a consistent voidless membrane.
5. Spread evenly over the subfloor, keeping the trowel at a 45° angle to the subfloor.

CLEANUP

Immediately clean tools with *Ultrabond® Urethane Cleaner* while the product is still fresh/wet. Note: *Planiseal WFM* is extremely difficult to remove when cured.

PROTECTION

Protect from light traffic for at least 12-16 hours or until dry.

FLOORING INSTALLATION

- Install flooring using *Ultrabond 975*, *Ultrabond 980* or *Ultrabond 990* after *Planiseal WFM* is dry, not waiting more than 7 days as the bond may be compromised.
- Refer to the Technical Data Sheet of the appropriate adhesive for more details.

MAPEI®

Product Performance Properties

Laboratory Tests	Results
Polymer type	Polyurethane
Percent solids	100%
VOCs (Rule #1168, California's SCAQMD)	< 68 g/L
Trowelability	Easy
Density	11.2 lbs. per U.S. gal. (1,35 g per mL)
Consistency	Smooth paste
Color	Tan
Shelf life	1 year when stored in original packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°C)
Flash point (Tag)	> 200°F (93°C)

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Table

Application Characteristics as a Membrane over Porous Substrates	
	Working Time†
At 50°F (10°C) and 80% humidity	3 hours, 30 minutes
At 73°F (23°C) and 50% humidity	2 hours, 30 minutes
At 100°F (38°C) and 20% humidity	4 hours, 15 minutes

† *Working time is the window of time for the adhesive to accept flooring.*

Note: Working time may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

Packaging

Product Code	Size
45368000	5 U.S. gals. (18,9 L)

Approximate Product Coverage

Typical Trowel	Coverage*
5/32" x 3/16" (4 x 4,5 mm) 	40 – 45 sq. ft. per U.S. gal. (0,98 – 1,10 m^2 per L)

* *Trowel dimensions are depth/width/space. Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of trowel used and setting practices.*

Classification Testing Details for Sound Reduction

Engineered Wood: 9/16" over a 6" (14 mm over a 15 cm) concrete slab		
	No Ceiling	**Suspended Gypsum Ceiling**
ASTM E492 / E989 (IIC)	48	69
ASTM E90 / E413 (IIC)	52	66
ASTM E2179 / E989 (Delta IIC)	19	N/A

Solid Hardwood: 5/16" over a 6" (8 mm over a 15 cm) concrete slab		
	No Ceiling	**Suspended Gypsum Ceiling**
ASTM E492 / E989 (STC)	51	N/A
ASTM E90 / E413 (IIC)	50	N/A

Planiseal™ WFM

RELATED DOCUMENTS

Reference Guide: Surface Preparation Requirements for floor-covering installation systems	RGF0409*

* *At www.mapei.com.*

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

MAPEI®

MAPEI Headquarters of the Americas
1144 East Newport Center Drive
Deerfield Beach, Florida 33442
Phone: 1-888-US-MAPEI
(1-888-876-2734)

Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service
1-800-42-MAPEI (1-800-426-2734)

For the most current product and warranty data, visit www.mapei.com.

Edition Date: August 4, 2009

4600
VINYL BACK
FLOOR COVERING ADHESIVE

ENVIRONMENTAL/PERFORMANCE:
- **Solvent-Free – VOC Compliant**
- **Excellent Open Time**
- **CRI Green Label Plus Certified**
- **Low odor / odorless when dry**
- **Non-Staining**

DESCRIPTION:
Fusion Series 4600 Vinyl Back Floor Covering Adhesive is a premium (non-staining) latex adhesive, designed to permanently install dimensionally stable vinyl backed resilient sheet goods, homogenous commercial grade PVC sheet flooring, PVC backed carpet, PVC backed carpet tiles, PVC sheet vinyl (vinyl backed), vinyl tile, vinyl plank, linoleum, and linoleum tile. 4600 may be used on all grades of concrete on above or below grade in the absence of moisture, as well as suspended approved wood floors (APA). 4600 may also be used for installing over existing, non-cushioned resilient flooring.

This adhesive is non-flammable, water and alkali resistant and freeze-thaw stable. 4600 has excellent resistance to plasticizer migration and sets to a tough permanent bond.

SUB-FLOOR PREPARATION:
Follow all manufactures recommendations and industry standards regarding sub-floor preparation.

We require that moisture tests be performed on all concrete sub-floors regardless of grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing should be performed by ASTM F1869 Calcium Chloride Tests with moisture levels not to exceed three (3) pounds per Twenty-Four (24) hours per one thousand (1000) square feet or ASTM F2170 In Situ Relative Humidity Test with readings, not to exceed seventy-five (75) percent. Additional information with regard to these tests and results can be obtained through Para-Chem's Technical Service Department.

Additional information with regard to sub-floor installation and requirements can be found in ASTM F-710 or CRI 104-105.

DIRECTIONS:
1. Store flooring and adhesive at 65-70°F for 24 hours prior to and during installation.
2. All sub-floors must be clean, dry, free of dust, dirt, wax, paint, grease or any other contaminants that might interfere with the adhesive bond.
3. Follow Manufacturer's recommendations as to seaming and sealing. Roll flooring with a 75-100 pound roller.
4. Cracks and uneven surfaces must be filled with a cement based patching compound such as Parabond Micro Finish or PP-Plus. Parabond M-600 may be used if there is no evidence of moisture.

PVC backed carpet and carpet tiles and PVC sheet vinyl (with vinyl backing).

1. Trowel recommendations for these products are listed on the 4600 trowel chart.
2. For PVC backed carpet, carpet tile, and homogeneous sheet vinyl (vinyl backed), the adhesive must be allowed to dry to the touch so that there is little or no transfer of adhesive to the finger.
3. Once the adhesive reaches the dry-to-the-touch state, it is ready to accept flooring.
4. Rolling with a three-section floor roller should take place immediately after the material has been placed into the adhesive.
5. For carpet and carpet tile, a 50-75 pound roller should be utilized.
6. For homogenous sheet vinyl, a 100-pound roller is recommended.
7. From the time the adhesive is allowed to dry to the touch, to the time it must be covered, is approximately 45 minutes.
8. If the adhesive is allowed to remain uncovered after initially drying to touch, for periods longer than the recommended 45 minutes, a loss in adhesion strength will result. Care must be taken by the installer not to spread more than can be worked appropriately within the 45 minute time frame.
9. Installation of this product on non-porous sub-floors utilizing a wet application of adhesive is **Not** recommended or warranted.

Vinyl tile, vinyl plank, linoleum and linoleum tiles.

1. Follow trowel recommendations listed on 4600 trowel chart.
2. 4600 is recommended for porous and non-porous applications of vinyl tile, vinyl plank, linoleum, and linoleum tile.
3. For porous applications, once troweled the adhesive should be allowed to remain open (flash-off) for approximately 5-10 minutes before placement of the flooring material.
4. Once placed, the material should be rolled immediately utilizing a 100 pound three-section roller.
5. **Note:** It is the responsibility of the user to determine whether or not the sub-floor to be covered is porous. To determine if a sub-floor is porous, place two droplets of water in various areas. If the sub-floor is porous, the water will be absorbed within a few seconds.
6. For non-porous applications follow trowel recommendations as listed in 4600 trowel chart.
7. Non-porous installations require that the adhesive be allowed to dry to the touch, so that there is little or no transfer of adhesive to the finger.
8. Once the adhesive dries to the touch, it is ready to accept flooring material.
9. Rolling should take place immediately after the flooring material has been placed into the adhesive.
10. From the time the adhesive is allowed to dry to the touch, to the time it must be covered is approximately 45 minutes.
11. If the adhesive is allowed to remain uncovered, after initially drying to touch, for periods longer than the recommended 45 minutes a loss in adhesion strength will result. Care must be taken by the installer not to spread more adhesive than can be worked appropriately within the 45 minute time frame.

NOTE: If any question exists by the installer or floor covering dealer as to whether or not this product is appropriate, contact Para-Chem's Technical Service Department.

CLEAN-UP:
Soapy water followed by Mineral Spirits, or M-315 Cleaner.

DO NOT APPLY SOLVENT DIRECTLY TO FLOORING MATERIAL.

CAUTION: Mineral Spirits is flammable. Read and follow all precautions on container label.

COVERAGE AND TROWEL RECOMMENDATION:
Approx. 100 sq. ft./gal with 1/16" square notch
Approx 150 sq. ft./gal with 1/16"X1/16"x1/16" V-notch
Approx 250 sq. ft./gal with 1/16"x1/32"x1/32" U-notch

TROWEL RECOMMENDATIONS FOR 4600

Homogeneous Sheet Vinyl (Vinyl Backed) All Carpets	1/16" x 1/32" x 1/32" U-Notch
PVC Backed Carpet and Carpet Tiles All Products	1/16" x 1/16" x 1/16" V-Notch

Vinyl Tile and Vinyl Plank

Gauge	Porous	Non-Porous
Greater than .080"	1/16" x 1/16" x 1/16" Sq Notch	1/16" x 1/16" x 1/16" V-Notch
Greater than 0.050"-0.080"	1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/32" x 1/32" U-Notch
0.050" or Less	1/16" x 1/32" x 1/32" U-Notch	1/16" x 1/32" x 1/32" U-Notch

Linoleum and Linoleum Tile

Gauge	Porous	Non -Porous
Greater than 0.080"	1/16" x 1/16" x 1/16" Sq Notch	1/16" x 1/16" x 1/16" Sq Notch
Less than or equal to 0.080"	1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/16" x 1/16" V-Notch

Vinyl Skin Backed Resilient Sheet Goods

Porous	Non-Porous
1/16" x 1/16" x 1/16" V-Notch	1/16" x 1/32" x 1/32" U-Notch

PHYSICAL PROPERTIES:
Freeze Thaw 5 cycles @ 0°F
Shelf Life 1 yr @70°F in un-opened container
Open Time: Up to 45 minutes (Once dry to the touch) depending upon sub-floor porosity, temperature and humidity conditions and ventilation.

CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:
Solvent Free Product.
SCAQMD Rule 1168: VOC compliant.
SCAQMD Rule 443.1: Grams of VOC per Liter of Material < 0 gram/liter.
Grams of VOC per Liter of Coating < 0 gram/liter.

FOR MORE INFORMATION READ MATERIAL SAFETY DATA SHEET

KEEP OUT OF REACH OF CHILDREN

WARNING!!
Various Federal, State and Local Government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable regulations. Follow the RFCI's Recommended Work Practices for Removal of Resilient Floor Coverings.
RFCI, 401 East Jefferson St., Suite 102, Rockville, MD 20850 – phone 301-340-8580

FIVE YEAR NO-NONSENSE WARRANTY, GOOD AS GOLD WARRANTY
4600 is warranted against cohesive failure (loss of bond) and formulated so as not to discolor or cause adhesive-induced staining in today's felt or vinyl backed sheet flooring and/or vinyl composition floor tile for

five years from the date of installation if flooring is professionally installed according to manufacturer's guidelines, CRI-104, 105 ASTM F-710 and RFCI suggested practices. This limited warranty covers materials and reasonable labor costs for five years (materials meaning same type and grade if available). If unavailable or discontinued, Para-Chem reserves the right to pay dollar amount of initial purchase.

CONSEQUENTIAL/INCIDENTAL DAMAGE EXCLUSION

Para-Chem excludes and will not pay consequential or incidental damages under this limited warranty. By this we mean any loss, expense or damage other than to flooring itself that may result from a defect in the adhesive itself. The warranty against cohesive failure, staining or discoloration are the exclusive warranties offered by Para-Chem. All other warranties, including the warranties of merchantability and fitness for a specific purpose, are specifically disclaimed and there are no other warranties regarding these products, express or implied.

MATERIAL SAFETY DATA SHEET

Para-Chem®, PO Box 127, Simpsonville, SC 29681
24-Hour Emergency Telephone: (864) 967-7691

SECTION 1. PRODUCT IDENTIFICATION

PRODUCT NAME: PARABOND® M-4600 SOLV-FREE VINYL FLOOR COVERING ADHESIVE
CHEMICAL FAMILY: Water Base Adhesive

SECTION 2. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

Chemical Name	CAS Number	% by Weight	ACGIH TLV	OSHA PEL
None				

SECTION 3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Eyes, skin.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.
POTENTIAL HEALTH EFFECTS:
EYE CONTACT: May cause slight irritation, redness, tearing.
SKIN CONTACT: May cause slight irritation with prolonged contact.
INGESTION: May cause gastric distress.
INHALATION: May cause respiratory irritation.
CHRONIC: None known.
CARCINOGENICITY: This product contains no ingredient above the OSHA minimum reporting threshold listed as a carcinogen by IARC, NTP, or OSHA.

SECTION 4. FIRST AID MEASURES

EYE CONTACT: Flush with water for 15 minutes. Contact a physician if irritation occurs.
SKIN CONTACT: Wash with soap and water.
INGESTION: Do not induce vomiting. Contact a physician.
INHALATION: Remove to fresh air.

SECTION 5. FIRE-FIGHTING MEASURES

FLASH POINT (^{o})F: None.
LOWER FLAMMABLE LIMIT: None.
UPPER FLAMMABLE LIMIT: None.
FIRE-FIGHTING INSTRUCTIONS: Use protective clothing and self-contained breathing apparatus.
EXTINGUISHING MEDIA: Water fog, CO_2, dry chemical, and chemical foam.
DECOMPOSITION PRODUCTS: Dried material may produce CO, CO_2.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spill. Scoop or shovel into secure container(s) for recovery or disposal. Dispense sand, sawdust, or vermiculite and absorb residue. Collect and place in waste container. Wash area thoroughly with water.

SECTION 7. HANDLING AND STORAGE

HANDLING: Use good hygienic practices. Wash hands before eating, using washroom or smoking. Keep out of the reach of children.
STORAGE: Store above 40° F. Freeze-thaw stable up to five cycles at 0° F.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:
EYE/FACE PROTECTION: Safety glasses or chemical splash goggles.
SKIN PROTECTION: Leather or rubber gloves
RESPIRATORY PROTECTION: Not normally required with good ventilation.
ENGINEERING CONTROLS: Normal room ventilation. Use floor and ceiling fans, open doors and windows during application to ventilate work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F): 212
SPECIFIC GRAVITY (WATER = 1): 1.12
VAPOR PRESSURE: Same as water.
VAPOR DENSITY(air=1): Same as water.
% VOLATILE BY WEIGHT: 35
pH: 8.8
APPEARANCE AND ODOR: White colored paste with little or no odor.

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: None.

SECTION 11. TOXICOLOGICAL INFORMATION

No information available

SECTION 12. ECOLOGICAL INFORMATION

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State and Local regulations.

SECTION 14. TRANSPORT INFORMATION

For domestic transportation purposes, this product is not designated as a hazardous material by the U.S. Department Of Transportation.

SECTION 15. REGULATORY INFORMATION

TSCA: The components of this product are listed on the TSCA inventory.
SARA TITLE III:
Section 311 and 312 Health and Physical Hazards:

Immediate	Delayed	Fire	Pressure	Reactivity
[ ]	[ ]	[ ]	[ ]	[ ]

Section 313: Contains no components at or above EPA reporting thresholds.
CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:
Solvent Free Product.
SCAQMD Rule 1168: VOC compliant.
SCAQMD Rule 443.1: Grams of VOC per Liter of Material - 0 grams/liter.
Grams of VOC per Liter of Coating - 0 grams/liter.

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health = 1 Flammability = 0
Reactivity = 0 Personal Protective Equipment = B
Hazard rating scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

Para-Chem, Inc. believes the statements, technical information and recommendations contained herein are reliable. They are given without warranty or guarantee of any kind, expressed or implied.

DATE ISSUED: April 30, 2009 [Rev. 2] PREPARED BY: R. W. Smith, Jr.

Version: April 13th, 2010

MAPEI®

Ultrabond® Urethane Cleaner

Professional Adhesive Remover

DESCRIPTION

Ultrabond Urethane Cleaner is a ready-to-use urethane adhesive cleaner designed to effectively remove wet urethane adhesive residues, such as *Ultrabond ECO® 975*, *Ultrabond ECO 980*, *Ultrabond ECO 990* and *Planiseal™ WFM*, from the surface of prefinished wood flooring. It is low-odor, nonflammable, pH-neutral and biodegradable. Safe for use on most types of prefinished wood flooring including parquet, engineered, solid and bamboo, *Ultrabond Urethane Cleaner* also removes urethane adhesive from trowels and tools. Simple to use, it is conveniently packaged in both quarts and pre-moistened towelettes.

FEATURES AND BENEFITS

- Removes wet urethane adhesives from wood-flooring surface
- Won't leave a residue on the surface
- Cleans tools and is nonflammable

WHERE TO USE

- Interior residential wood-flooring installations
- Interior commercial wood-flooring installations

LIMITATIONS

- Do not use as a hand-cleaner. Use gloves to protect skin.
- Protect carpeting, wood cabinets, painted surfaces and other finished surfaces.
- Avoid spilling excess amounts of *Ultrabond Urethane Cleaner*, which may seep in between wood flooring and weaken the bond of the urethane adhesive. Keep an absorbent product handy (paper towels, sawdust, kitty litter, etc.) to absorb spills.
- Do not leave *Ultrabond Urethane Cleaner* on the surface of the wood flooring for longer than 60 minutes.
- Thoroughly rinse and dry the area of application after use.

MIXING

- Ready to use; no mixing necessary

Note: Choose all appropriate safety equipment before use. Refer to MSDS for more information.

PRODUCT APPLICATION

Urethane adhesives are very difficult to remove once dry and cured. During the installation of glue-down wood flooring, make every effort to prevent adhesive from getting on the flooring surface. For best results, remove adhesive smudges and drops immediately during installation.

Read all installation instructions thoroughly before installation.

Test for compatibility with flooring in a small inconspicuous area before using.

Avoid using metal blades or other sharp objects when removing the adhesive, as this can permanently damage the surface of the finished floor.

- For removing fresh, wet urethane adhesives or membranes from prefinished wood flooring during the installation of glue-down wood flooring:
  1. Dampen a nonabrasive, clean white towel or cloth with *Ultrabond Urethane Cleaner*, or use a pre-moistened *Ultrabond Urethane Cleaner* towelette.
  2. Place the towel/cloth or towelette on fresh, wet adhesive and allow to remain for about 5 to 10 minutes.
  3. Remove adhesive with the soft, clean white towel or pre-moistened towelette.

Product Performance Properties

Laboratory Tests	Results
VOCs (Rule # 1168 of California's SCAQMD)	< 575 g/L
Odor	Slight sweet
Density	8.2 to 8.3 lbs. per U.S. gal. (0,9 to 1,0 g per mL)
Consistency	Liquid
Color	Clear
Shelf life	2 years when stored in original packaging at 73°F (23°C)
Storage conditions	50°F to 90°F (10°C to 32°C)
Flash point (Tag)	> 200°F (93°C)

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Packaging

Product Code	Size
03432000	1 U.S. qt. (946 mL)
03430000	Pop-up dispenser (30 wipes)
03460000	Pop-up dispenser (60 wipes)

4. Rinse the area completely with clean soapy water.
5. Dry the area with another soft, clean white towel.

- For removing semi-dry urethane adhesives or membranes from prefinished wood flooring after the installation is complete (up to 6 hours after installation):
  1. Place a soft, clean white towel soaked with *Ultrabond Urethane Cleaner* or a pre-moistened towelette directly on the affected area.
  2. Allow the cleaner to remain on the dried adhesive for about 30 minutes.
  3. Gently scrape the softened adhesive, using a plastic tool such as an automotive ice scraper or putty knife. Do not use metal blades or scrapers.
  4. Remove loose adhesive with the soft, clean white towel or pre-moistened towelette.
  5. Rinse the area completely with clean soapy water.
  6. Dry the area with another soft, clean white towel.
  7. Repeat if necessary.
- For removing urethane residues from trowels and tools:
  1. Soak trowels and tools in *Ultrabond Urethane Cleaner*.
  2. Scrape and/or wipe off softened adhesive.
  3. Rinse tools with clean soapy water and allow to dry.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

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For the most current BEST-BACKED™ product data and warranty information, visit www.mapei.com.

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