

PVC Free Resilient Flooring Products

Manufacturer	Forbo	Armstrong	Domko Tarkett	Amtico	Expanko
Lines	Marmoleum	Marmorette, Linoplan, +		Stratica	
Applications	Commercial/ residential interiors	Commercial/ residential interiors		Commercial interiors	Commercial/ residential interiors
Warranty	5 year	5 year		10 year (on market for 8)	10 year
Materials	Linoleum (linseed oil, wood, cork, rosin, limestone, pigments, jute or polyester backing)	Linoleum (linseed oil, cork, jute, natural resins)		Dupont Surlyn and ethylene copolymer	Cork
Size	sheet 79" X 105' X 2.5mm tile 20"x20" or 13"x13" in 2.5mm & 2.0mm	18.9" X 18.9" tile in 2.5 mm or 3.2 mm		0.1" X '13-1/2" & 19" squares & 4"X39" planks	12" X 12" & 24" X 24" tiles in 3/16" and 5/16" thick other sizes by special order
# patterns & colors	68+	32 colors		24 solids, 15 stone, 9 terrazos, 4 marble, 4 granites, 15 woods	
Finish				highly durable (golf ball surface claims outperforms lino, vinyl, marble), very stain resistant	Unfinished, Polyethylene, or Natural carnauba wax Expanko 960 water dispersion barrier, polyurethane polymer
Adhesives: releasable, solvents, VOCs				2 part polyurethane, not solvent based, easy & costs less but need to roll	Expanko 2260 - zero VOC, water based, white acrylic latex
Antimicrobial agent	naturally antimicrobial	naturally antimicrobial		??	cork is naturally mold resistant
Seam sealing	heat weld			??	
Surface (ADA wet & dry)				ADA	ADA
Flammability	Class I	Class I		Class 1	Class 1
Acoustic	ASTM 492 6dB			ISO 717 + 5 db	
Maintenance: clean & repair (procedure, schedule, chemicals)	No strip & recoat necessary if use dry maintenance system	Strip and polish		no floor dressing, clean w/ water or neutral ph cleanser	sweep & damp mop, screen & recoat polyurethane every 4-8 yrs (8-10 residential)
Installation issues: surface, skills, tools, time	5# moisture test			3# or use moisture barrier one syetem for <=12#, another for 12#+, Western install Mogr monitors all	Moisture <3#, Roll tiles
Installed costs (commercial scale)	\$3-\$5	\$3.50 - 5.25		\$3.65 material cost, install ~\$1.50, total ~\$6.50/sf	\$5 un fin, \$5.50 wax, \$6.15 poly, \$6.48 mosaic (+ \$1.50 install)
Notes					
National office	Hazleton, PA 800-842-7839	Armstrong 717-397-0611		Atlanta, GA 404-267-1900	(800) 345-6202 West Chester, PA

PVC Free Resilient Flooring Products

Manufacturer	Forbo	Armstrong	Domko Tarkett	Amtico	Expanko
Lines	Marmoleum	Marmorette, Linoplan, +		Stratica	
Manufacturing sites	UK				grown in Portugal manufacture in England
Web site	www.forbolinoleumna.com	www.armstrong.com/reslinoleumna		www.stratica.com	www.expanko.com
Bay area rep				Ann Donkle 925-838-9490 adonkle@amtico.com	The Patton Group Brian Richards 415-642-1222 or Lisa Schoichet 650-960-
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness				No water used, heat bonded laminate, no solvents, all manufacture waste reused. Frauenhoffer Inst study claims 30% less energy than vinyl, 29% less water, 33% less global warming, 54% less acidification. Is petrochemical. Surelyn process unknown.	Cork from Portugal
Recycled or renewable content	All but limestone is rapidly renewable (ex polyester backed)	All but limestone is rapidly renewable		none	
Recyclability/ disposal	decomposes in dump, may be compostable			theoretically recyclable, no infrastructure	
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)	Earlier VOC problems have been solved. Now passes 1350 testing	Some questions about VOC emissions (non carcinogenic)	unknown	BAA tested for CA East End IAQ, tests on file at HBN - ask manufacturer for info	
Corporate enviro practices - ISO 9002, 14001, etc	ISO 9001 & 14001			ISO 9002 and 14001	
LCA analysis?	See web site				
Overall comments	*Pro: Low maintenance, renewable ingredients, can avoid strip & wax. *Con: Marginal 1350 on East End project.	*Pro: Renewable content, *Con: Marginal 1350 on East End project.		*Pro: Excellent in IAQ, No strip & wax *Con: completely petrochemical based with no (post consumer) recycled content or commitment to closing the loop	*Pro: renewable product, Con: unknown IAQ->

This list is intended to provide a representative sampling of products and materials that are commercially available for a variety of applications comprehensive and in a rapidly changing market, the completeness and accuracy of this information cannot be guaranteed. Inclusion on endorsement by HBN of any product or manufacturer, nor any warranty of the appropriateness of listed products for a particular application. Replication of this information for educational purposes is permitted with credit to HBN and the inclusion of these disclaimers. last updated 6/27/02

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PVC Free Resilient Flooring Products

Manufacturer	Expanko	Gerbert	Gerbert	Duro-design	We Cork
Lines		Mediterranean	Verte		
Applications	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors
Warranty				5 year	
Materials	60 cork/ 40 rubber	Cork	Cork/MDF	Cork	Cork and MDF
Size		300mm (11.8")X300mm or 600mm(23.6")X300mm X 4mm(5/32") tile	900 mm x 300 mm (35.43" x 11.81") X 11mm (7/16") float	12"X12"or 12"X24" tile X 4mm or 8mm, also 1/2" float	12"X12"X3/16" tile, 4"X36"X3/16" plank, 11-7/8"X35-9/16"X7/16" float
# patterns & colors		8 natural patterns, 11 colorways	8 patterns	6 naturals, 58 colors, custom available	4 tile, 6 float
Finish		Natural: UV-curable lacquer, matte/satin finish, Wax or unfinished avail, Color: UV curable acrylic-urethane, matte/satin	Prefinished w/UV-curable laquer, matte/satin finish Unfinished available	unfinished	unfinished or wax or matte water based polyurethane sealer coat
Adhesives: releasable, solvents, VOCs			PVA (Polyvinyl Acetate) adhesive in grooves		Bostik's Best, Dri-Tac6200, Chapko SafeSet 231& 31, Mapei540, Franklin811
Antimicrobial agent	cork is naturally mold resistant	cork is naturally mold resistant	cork is naturally mold resistant	cork is naturally mold resistant	cork is naturally mold resistant
Seam sealing					
Surface (ADA wet & dry)		ADA flat>= .6		ADA ASTM C-1028 Dry .7048, Wet .7293	
Flammability		Class B 2	Class B 2	Class II	
Acoustic		DIN 52210 - 4mm=12db	DIN 52210 -19db	FIIC(impact) 53, FSTC (transmission) 67	
Maintenance: clean & repair (procedure, schedule, chemicals)	sweep & damp mop, screen & recoat polyure every 2-6 yrs (8-10 residential), buff and paste wax every 6-12 mos	vacuum and damp mop or Taski P-44	vacuum and damp mop or Taski P-44	revarnish 2-3 yrs commercial, 5-7 residential	vacuum or damp mop with mild detergent, wax may be rewaxed, varnish may be polished (not waxed)
Installation issues: surface, skills, tools, time		need 3# moisture	float, 3# or dampproof membrane	apply 4 coats of water based urethane	need <3# moisture for reg, float floor cango over any w/moisture barrier
Installed costs (commercial scale)		\$5-8?		\$10-\$11/sf	\$5 - \$8 installed, depending on finish \$8-\$9 for float floor
Notes					
National office	(800) 345-6202 West Chester, PA	888-359-5466 Lancaster, PA gerbertinfo@gerbertltd.com	888-359-5466 Lancaster, PA gerbertinfo@gerbertltd.com	888-528-8518 Laval, Quebec info@durodesign.com	Stratham, NH 800-666-CORK 603-778-8558

PVC Free Resilient Flooring Products

Manufacturer	Expanko	Gerbert	Gerbert	Duro-design	We Cork
Lines		Mediterranean	Verte		
Manufacturing sites	grown in Portugal manufacture in England	grown and manufactured in Portugal	Europe?		grown in Portugal
Web site	www.expanko.com	www.gerbertltd.com	www.gerbertltd.com	www.durodesign.com	www.wecork.com
Bay area rep	Lisa Schoichet 650-960- 1395 X3	Bruce Adams 707-938- 8431 bruceadams@ mindspring.com	Bruce Adams 707-938- 8431 bruceadams@ mindspring.com	Bruce Adams 707-938- 8431 bruceadams@ mindspring.com	Lori Stambler Arc Inc., SF 415-541-0969 arcagents@aol.com
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness	Cork from Portugal	Cork from Portugal			no formaldehyde in binder, MDF or adhesives
Recycled or renewable content					
Recyclability/ disposal					
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)					
Corporate enviro practices - ISO 9002, 14001, etc					
LCA analysis?					
Overall comments					

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PVC Free Resilient Flooring Products

Manufacturer	Wicanders	ToMarket	Natural Cork	Natural Cork	Flooring Alternatives
Lines	EcoCork	Unicork	Deco Cork		
Applications	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors		Commercial/ residential interiors
Warranty		10 year			
Materials	Cork, MDF	Cork	Linoleum/Cork	Cork and MDF	Cork
Size	tile and float	12"X24"X5mm, beveled or straight edge	floating floor	tile	12"X12"X3/16" tile, 1'X3'X3/8" float
# patterns & colors		12 colors			8 naturals, 18 colors in solids, stripes or terrazo
Finish	NOTE: some Wicander products have a vinyl wear layer	1 coats of polymer (normal) or 2 coats of laquer (high traffic) finish applied after installation			unfished or water based acrylic finish
Adhesives: releasable, solvents, VOCs		Unicork contact adhesive			
Antimicrobial agent		cork is naturally mold resistant			cork is naturally mold resistant
Seam sealing					
Surface (ADA wet & dry)		ADA - 66			non skid when wet
Flammability		Class II			
Acoustic					
Maintenance: clean & repair (procedure, schedule, chemicals)		Damp mop with mild detergent, strip and reapply polymer coat once per year			
Installation issues: surface, skills, tools, time		need <=3# moisture, seal with 2 addtl coats of laquer and optional polymer coat			
Installed costs (commercial scale)					
Notes					
National office		LA, CA (800)465-4605			510-548-4914 877-639-1345

PVC Free Resilient Flooring Products

Manufacturer	Wicanders	ToMarket	Natural Cork	Natural Cork	Flooring Alternatives
Lines	EcoCork	Unicork	Deco Cork		
Manufacturing sites					grown on Sardinia off coast of Italy
Web site	www.wicanders.com	www.tomkt.com	www.naturalcork.com	www.naturalcork.com	www.flooringalternatives.com
Bay area rep		Walter Huff, Los Altos, 650-960-1395 (or Brian Richard/Patton group)			510-548-4914 877-639-1345
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness					
Recycled or renewable content					
Recyclability/ disposal					
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)					
Corporate enviro practices - ISO 9002, 14001, etc					
LCA analysis?					
Overall comments					

PVC Free Resilient Flooring Products

Manufacturer	Flooring Alternatives	Bamboo Hardwoods	Moso	Lignasil	Freudenberg/ Nora Rubber
Lines				Madera	Norament
Applications	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors	Commercial/ residential interiors	Heavy traffic
Warranty		25 year on prefinish			1 yr defect, 10 yr wear
Materials	Bamboo	Bamboo w/ PVA-C formaldehyde free glue	Bamboo	PI & ag recycled wood fiber	45% synthetic rubber, 45% mineral filler (clay), 5: pigments (no heavy metal). 5% pi recycle
Size		9/16" X 7.5" X 6' float or nail		tile	tile 100cmX100cmX3.5mm (39.37"X39.37"X.14") or 62.5X62.5X3.5 (24.6")
# patterns & colors		4 colors			Wide range of solid colors (incl light colors) and speckle patterns
Finish		Acrylic urethane aluminum oxide finish, UV resistant. Also available unfinished			Vulcanized for very non pc
Adhesives: releasable, solvents, VOCs		formaldehyde free			solvent free adhesives available
Antimicrobial agent					Integral "Cleanguard" me n
Seam sealing					heat weld or cold weld
Surface (ADA wet & dry)					raised round or hammered, ADA wet or dry
Flammability					Class 1 (Class A optional) -
Acoustic					
Maintenance: clean & repair (procedure, schedule, chemicals)					No seal coat required -----
Installation issues: surface, skills, tools, time					
Installed costs (commercial scale)		prefinished \$10/sf installed (add \$1 for float)			\$7/sf
Notes					Options: matching cover base and stair tread.
National office	510-548-4914 877-639-1346	Seattle, WA 206-264-2414			Freudenberg Bldg Systems,

PVC Free Resilient Flooring Products

Manufacturer	Flooring Alternatives	Bamboo Hardwoods	Moso	Lignasil	Freudenberg/ Nora Rubber
Lines				Madera	Norament
Manufacturing sites					Germany (warehouse in Lav
Web site	www.flooringalternatives.com	www.bamboohardwoods.com/	www.moso.com	www.lignasil.com	www.norarubber.com
Bay area rep	510-548-4914 877-639-1346	Mari Strain 510-548-4914 maristrain@hotmail.com			Brian Richards 415-716-402
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness					Transporte
Recycled or renewable content					none
Recyclability/ disposal					Theoretically recyclable bu
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)					Noraplan tested by AQ
Corporate enviro practices - ISO 9002, 14001, etc		ISO 9000			ISO 14001-----
LCA analysis?					
Overall comments					*Pro: Appears to have goc planning CA 1350 CHPS product line. No strip & w materials, 20-45% petr commitment to recy

This list is intended to provide a sur
In a rapidly changing market the coi
Inclusion on this list does not imply
particular application.
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PVC Free Resilient Flooring Products

Manufacturer	Freudenberg/ Nora Rubber	Freudenberg/ Nora Rubber	Freudenberg/ Nora Rubber	Dodge-Regupol	ToMarket/DinoFlex
Lines	Noraplan	Ecoment	Ecoplan	EcoSurface	Atmosphere
Applications	commerical interiors	Heavy traffic	Commercial interiors	Commerical interiors	Commerical interiors
Warranty	1 yr defect, 5 yr wear	1 yr defect, 5 yr wear	1 yr defect, 5 yr wear	5 years	2 years
Materials	rubber (10% natural 20% synthetic), 55% mineral filler (clay), 5: pigments (no heavy metal). 10% PI recycle	Recycled rubber -----		Recycled Tire Styrene Butadiene Rubber (SPR) and post industrial EPDM	Recycled Tire SPR & virgin colored EPDM
Size	roll 49' X 48" X 0.8" tile 24" X 24" X 0.8"	tile 100cm X 100cm X 9mm (39.37" X 39.37" X .36")	roll 49' X 48" X 0.8" tile 24" X 24" X 0.8"	tile 18" X 18", 36" X 36" rolls 50' X 4' thickness (5/32, 1/4, 3/8")	tile 38" X 38" X 5/32"
# patterns & colors	Wide range of solid colors and speckle patterns	9 gray and tan colors with flecks	9 gray and tan colors with flecks	22 color palette, solid or speckled, custom mixes available	36 speckle patterns
Finish	porous surface -----				
Adhesives: releasable, solvents, VOCs	solvent free adhesives available	solvent free adhesives available	solvent free adhesives available	1 part polyurethane, meets CA reqs	Interlocking mats or 2 part epoxy adhesive
Antimicrobial agent	Manufacturing process results in non porous surface. Claim that it reduces likelihood of microbial problems without requiring antimicrobial treatment!				Claim "not promote fungal growth" coatings available
Seam sealing	heat weld or cold weld	heat weld or cold weld	heat weld or cold weld	none	
Surface (ADA wet & dry)	Smooth ADA wet or dry	raised round or hammered, ADA wet or dry	Smooth ADA wet or dry	Smooth COF>0.9 or hammered	ADA
Flammability	-----			Meets NYC reqs?	Class I/ Class II
Acoustic	Check Elastic series				
Maintenance: clean & repair (procedure, schedule, chemicals)	-----			Strip & seal recommended	No wax. Toski seal coat recommended for high traffic, reapply every 2-5 years
Installation issues: surface, skills, tools, time					
Installed costs (commercial scale)	\$4/sf	\$8/sf	\$3.40-\$4/sf	\$5-6 installed (\$2.35 material) no floor prep	\$3 - \$10/sf (depending on thickness and color)
Notes	Options: ESD, elastic, cove base & stair tread.	Options: ESD protection, cove base and stair tread in custom volume	Options: ESD protection, cove base and stair tread in custom volume	Options: logo	Options: logo. Young company and product
National office	Lawrence, MA 1-800-332-NORA Info@Freudenberg.Com -----			Lancaster, PA 866-883-7780 srz@gerberltd.com	DC 877-843-8184, LA, CA 800-465-4605

PVC Free Resilient Flooring Products

Manufacturer	Freudenberg/ Nora Rubber	Freudenberg/ Nora Rubber	Freudenberg/ Nora Rubber	Dodge-Regupol	ToMarket/DinoFlex
Lines	Noraplan	Ecoment	Ecoplan	EcoSurface	Atmosphere
Manufacturing sites	Worcester, MA and Lake Forest Hill, CA) considering US plants -----			Lancaster, PA	Salmon Arm BC Canada, www.dinoflex.com
Web site				www.regupol.com/	www.tomkt.com
Bay area rep	8 brichrds@thepattongroup.com -----			Bruce Adams 707-938-8431 bruceadams@mindspring.com	Walter Huff, Los Altos, 650-960-1395 (or Brian Richard/Patton group)
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness	derived from manufacture in Germany, unknown rubber production impacts				
Recycled or renewable content	none	almost 80% post industrial	almost 80% post industrial	600 series ~80% post consumer SPR	up to 100% depending on color
Recyclability/ disposal	not done at this time, 92% of post industrial waste is recycled or burned for energy			Technically but no take back program	Technically but no take back program
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)	S, meets WA State requirements (and 1350?), claim meet CA 1350 content screen, more products undergoing CA 1350 emissions tests			AQS Greenguard certified WA state, AQS on file at HBN - ask manufacturer	ORTECH tested to WA state, on file at HBN
Corporate enviro practices - ISO 9002, 14001, etc	-----				
LCA analysis?					
Overall comments	<p>and IAQ. State that they are test to confirm on more of tax cycle. *Con: All virgin chemical based and no recycle the product yet</p>	<p>*Pro: Appears to have good IAQ. State that they are planning CA 1350 CHPS test to confirm. No strip & wax cycle. Mostly recycled content but commitment to recycle their product to close the loop would improve</p>		<p>*Pro: Good tested IAQ and good recycled content. Commitment to recycle would improve. *Con: Suggest strip and wax maintenance</p>	<p>*Pro: Appears to have good IAQ but need individual VOC testing. Excellent recycled content. Appear to be committed to good corp environmental effort. *Con: Recommend Toski sealer reapply but only every few years.</p>

survey of products and materials that are commercially available for a variety of applications.
completeness and accuracy of this information cannot be guaranteed.
endorsement by HBN of any product or manufacturer, nor any warranty of the appropriateness of listed products for a

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PVC Free Resilient Flooring Products

Manufacturer	Mondo	Mondo	American Biltrite	Flexco	Johnsonite
Lines	Geode, Punti	Terranova	Estrie Marathon Classic	SpexTones	Roundel/Comfortech
Applications	Commerical interiors (also have sport floor product)	Commerical interiors	Commerical interiors	Commerical interiors	Commerical interiors
Warranty	1 yr defect, 5 year wear	1 yr defect, 10 year wear	10 year	10 year	10 yr w/ 4mm, 5yr 3.175
Materials	synthetic SB rubber, mineral fillers, organic and synthetic pigments, no heavy metals	synthetic SB rubber, mineral fillers, organic and synthetic pigments, no heavy metals	SBR synthetic rubber, pigments, extenders, processing oils and fillers	Virgin synthetic rubber	SBR, additives & colorants
Size	tile 24"X24" or roll 6'3" X 30 to 45' 2 mm thick	tile 38"X38" or 19"X19" ' 3 mm thick	tile 18" X 18" or 36" X 36" 3.5mm thick	tile 18"X18"X1/8" or 12"X12"X1/8"	tile 24" X 24" X 4 mm or 3.175mm
# patterns & colors	44 colors in organic or speckled patterns standard, custom available	15 colors standard + 40 solid colors in raised circle, custom available	21 solid colors	Black, red, gray, green with speckle colors	46 colors plus speckle
Finish					
Adhesives: releasable, solvents, VOCs	Mondo MP 500 water based acrylic		2 part epoxy and polyurethane adhesives or acrylic/latex	Epoxy, solvent free option	1 part no VOC acrylic latex adhesive, 2 part low VOC (12g) epoxy, 2 part low VOC (15g) urethane
Antimicrobial agent	Claim inherently anti bacterial. No coatings necessary				
Seam sealing	heat weld	heat weld	heat or cold weld		heat or cold weld
Surface (ADA wet & dry)	Smooth, sealskin, and hammered ADA (COF .69 dry .74 wet)	Slate ADA (COF .66 dry .69 wet) & raised circle	ADA compliant, 6 profiles	Hammered, textured, studs SCOF>0.60	Smooth & raised disk ADA
Flammability	Class I	Class I	ASTM E-648/NFPA 253 Class 1	Class 1	Class 1 / Class A optional
Acoustic					
Maintenance: clean & repair (procedure, schedule, chemicals)	No surface coating recommended		mop and buff only, No ongoing coating	No wax	Strip& wax
Installation issues: surface, skills, tools, time	#3 moisture	#3 moisture	suggest intial conditioner to protect during construction		moisture <=3#
Installed costs (commercial scale)	\$4-\$5		\$5/sf installed (glue down, +\$1 for heat weld	\$3-4/sf	
Notes	Options: logo, custom designs, stairtread. Also make sports surfaces		cove base, stair treads, risers and stringers	Reports of strong odors on internet	Stair tread, wall base
National office	Laval, QC 450-967-5800, 800-361-3747		Mississauga, Ontario 905-507-2402 800-437-8743 flooring@american-biltrite.com	Tuscumbia, AL 800.633.3151 info@flexcofloors.com	Chagrin Falls, Ohio, (800) 899-8916 Waterloo, Ontario info@johnsonite.com

PVC Free Resilient Flooring Products

Manufacturer	Mondo	Mondo	American Biltrite	Flexco	Johnsonite
Lines	Geode, Punti	Terranova	Estrie Marathon Classic	SpexTones	Roundel/Comfortech
Manufacturing sites			Sherbrouke, Quebec	Tuscumbia, AL	
Web site	www.mondousa.com		http://www.american-biltrite.com/estrie/	www.flexcofloors.com/	www.johnsonite.com
Bay area rep	Garret Davelaar 800-962-5334 425-776-3242 (WA) gdavelaar@mondousa.com		Bernie Hilton, 206-310-2134	Lori Stambler, ARC 415-541-0969 arcagents@aol.com	Sturla, Inc./Medallion Carpets, San Leandro CA 510-351-8104 Amber
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness				RCA Rubber in Akron, OH is apparently the main manufacturer of sheet rubber goods in the US and feeds all the domestics - problems in past but look realtively clean on EDF Scorecard	
Recycled or renewable content	none		primary is not color flec is recycled	none, but just coming out with new product with recycled content	unknown
Recyclability/ disposal	Technically but no take back program		recyclable but no infrastructure, recycle scrap in house		
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)	ASTM D5116	ASTM D5116	claim "no or low VOC"		No testing
Corporate enviro practices - ISO 9002, 14001, etc	Stated goal to eliminate hazardous chemicals in production and manufacture products that can be recycled. USGBC member				
LCA analysis?					
Overall comments	*Pro: Appears to have good IAQ, HBN currently awaiting test information from manufacturer to confirm. Good corporate commitment, No strip & wax cycle. Unknown commitment to recycle. *Con: All virgin materials, petrochemical based.		*Pro: Claims good IAQ, but still awaiting test information. No strip and wax cycle. *Con: Minimal recycled content.	*Pro: no strip & wax *Con: Unknown IAQ, all virgin materials Call to check on new recycled product	*Con: No testing of IAQ, not clear that there is any recycled content. Strip & wax

PVC Free Resilient Flooring Products

Manufacturer	Johnsonite	US Rubber Recycling	US Rubber Recycling	RB Rubber	Yemm & Hart
Lines	Replay	SureStep Tire Tile	SureFlexx SportFloor		Tire Veneer
Applications	Sports floors	heavy traffic entry	sport, heavy traffic	Sports & barns	interior, exterior
Warranty	2 year	6 years w/Surebond	2 years prorated	15 yr defect	
Materials	Recycled auto & truck tires in urethane	Recycled truck and bus tires	Recycled crumb rubber	Recycled tires	Recycled K21Tire SPR & virgin colored EPDM
Size	tile 24" X 24" X 9.5 mm	tiles 12"X12", 18"X18" or rolls 12" or 18" all 3/8"	tiles 2' X 2' X 3/2" or 1/2" have interlocking option	planks 4'X6" & 4'X8' custom to 8'X10', thickness 3/4", 1/2" or 3/8"	tile 18"X18", 36"X36", roll 30to150"X4' thickness 1/4", 3/8" & other
# patterns & colors	46 colors plus speckle	Black	Black, 15% flek available in red, green blue, offwhite or combo	Black or black w/ 20% flec color	Black and 14 speckle colors
Finish					
Adhesives: releasable, solvents, VOCs	1 part no VOC water based acrylic latex adhesive, 2 part low VOC (15g) urethane	Surebond urethane adhesive	Dry lay interlock or Surebond urethane		Nordot #78H 2 part epoxy
Antimicrobial agent					
Seam sealing	none				
Surface (ADA wet & dry)	Smooth & raised disk ADA ASTM D-2047>=.8	Foot scraper pattern	Smooth	Antiskid or smooth	
Flammability	not rated	Federal DOCFFI 70	ASTM E648. Radian flux <0.10 W/cm sq		Class 2
Acoustic					
Maintenance: clean & repair (procedure, schedule, chemicals)	Strip & wax				Strip & seal
Installation issues: surface, skills, tools, time	moisture <=3#, seal with acrylic sealer				
Installed costs (commercial scale)					
Notes	Loose lay interlocking tiles available		Also outdoor paver (SuperFlexx red grn, blk		
National office	Chagrin Falls, Ohio, (800) 899-8916 Waterloo, Ontario info@johnsonite.com	Riverside CA 888-473-8453		McMinnville, OR 800-525-5530 info@usrubber.com	Marquand, MO 573-783-5434

PVC Free Resilient Flooring Products

Manufacturer	Johnsonite	US Rubber Recycling	US Rubber Recycling	RB Rubber	Yemm & Hart
Lines	Replay	SureStep Tire Tile	SureFlexx SportFloor		Tire Veneer
Manufacturing sites				McMinnville, OR	
Web site	www.johnsonite.com	www.usrubber.com	www.usrubber.com	www.rbrubber.com	www.yemhart.com
Bay area rep	Sturla, Inc./Medallion Carpets, San Leandro CA 510-351-8104 X214 John				
Bay area installers					
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness					
Recycled or renewable content	Claim 100%?	95% recycled	95% recycled	100% recycled tires (flec?)	up to 100% post consumer
Recyclability/ disposal				Can regrind to produce other mats	
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)	No testing	Claim no measurable VOC" No WA state type testing	Claim no measurable VOC" No WA state type testing		Not tested for emissions. Definite rubber smell
Corporate enviro practices - ISO 9002, 14001, etc					
LCA analysis?					
Overall comments	*Pro: High recycled content *Con: no claims on IAQ. Strip & wax	*Pro: High recycled content, *Con: no testing to back up emission claims	*Pro: High recycled content, *Con: no testing to back up emission claims	*Pro: High recycled content, *Con: no emission claims	*Pro: High recycled content, *Con: no testing to back up emission claims

PVC Free Resilient Flooring Products

Manufacturer	Tuflex	VINYL SHEET	VCT (Vinyl Composition Tile)
Lines	Spartus & Titan		
Applications	Sports floor		
Warranty	5 year prorated		
Materials	Vulcanized recycled rubber	PVC, plasticizers, stabilizers	PVC, Limestone, binders, stabilizers
Size	tile 27"X27"X3/8"		
# patterns & colors	16 patterns, Black and reds, grays, green with speckle colors		
Finish			
Adhesives: releasable, solvents, VOCs	Epoxy, solvent free option		
Antimicrobial agent			
Seam sealing			
Surface (ADA wet & dry)	Smooth 1.00 SCOF ADA		
Flammability	Class A		
Acoustic	0.60 coeff of sound absorption		
Maintenance: clean & repair (procedure, schedule, chemicals)	No wax?	strip and apply 2-4 coats of wax regularly	strip and apply 2-4 coats of wax regularly
Installation issues: surface, skills, tools, time			
Installed costs (commercial scale)		\$3.50-4.50 installed	\$1.50-2.25/sf material + \$1.50 install
Notes			
National office	Tampa, FL 800-543-0390 info@tuflex.com		

PVC Free Resilient Flooring Products

Manufacturer	Tuflex	VINYL SHEET	VCT (Vinyl Composition Tile)
Lines	Spartus & Titan		
Manufacturing sites			
Web site	www.tuflex.com		
Bay area rep			
Bay area installers			
Life cycle manufacturing impact: Waste, air & water impacts, PBTs, hazardous materials, energy intensiveness		PVC lifecycle effects, plasticizers, stabilizers. See PVC fact sheet	PVC lifecycle effects plus, mining of limestone. See PVC fact sheet
Recycled or renewable content	unknown	none	claim that PVC content is recycled
Recyclability/ disposal		none	none
VOC / IAQ testing: AQS, BAA, CA East End, WA State (doc)			
Corporate enviro practices - ISO 9002, 14001, etc			
LCA analysis?			
Overall comments	*Pro: Recycled content (actual amount unknown), *Con: no emission claims	See PVC fact sheet	See PVC fact sheet