

Milliken Modular Adhesive 100V

Pressure Sensitive Adhesive for Milliken Modular Tile

Description:

Milliken Modular Adhesive 100V is a non-flammable water-based pressure sensitive adhesive designed for the installation of Milliken Modular Carpet Tiles. This adhesive can also be used for vinyl backed carpet tiles and most carpet pads in double glue-down installations.

Packaging Benefits:

- Packaged in a 4 gallon Environmentally Friendly EkoBox
- The EkoBox is comprised of 100% Recycled Content and is 100% Recyclable
- Packaging Contributes to LEED MR Credit 2.1 (Construction Waste Management)
- Saves 2 Quarts of Oil as Compared to Traditional Plastic Pails
- Reduces Residual Adhesive Waste

Advantages:

- CRI Green Label Plus Approved
- Low odor
- Water and alkali resistant, and highly resistant to vinyl plasticizer migration
- Has good re-bonding characteristics
- Easy to trowel or apply with a roller
- Freeze thaw stable to 10 deg. F.
- May be installed on concrete above, on, or below grade in the absence of excess moisture and alkali, over metal, APA approved plywood, underlayment-grade hardboard, and Association grade particle board underlayment

Substrate Preparation:

The floor must be sound, smooth, dry and clean. Remove any dirt, wax, loose paint and all foreign matter that would interfere with a good bond. Do not use over existing adhesive or on chemically cleaned substrates. Seal porous or dusty concrete surfaces with an appropriate sealer. The installation site must be acclimated with HVAC in operation. The floor and room temperature, as well as flooring materials and adhesive, must be maintained at 65°- 95° F, and the humidity below 65% for 48 hours prior to, during, and after the testing and installation.

Substrate preparation, moisture and alkalinity testing must comply with CRI 104 guidelines. Concrete substrates must be tested for moisture vapor emissions rate (MVER) per Calcium Chloride Test Method ASTM F1869, or for in-situ Relative Humidity (RH) per ASTM F2170. MVER of concrete substrates must not exceed 5.0 lbs., and RH can be no higher than 80%. The concrete slab pH must not exceed 9.0.

Application:

Milliken Modular Adhesive 100V is releasable when flooring is applied to dry adhesive and permanent when applied to wet adhesive. Spread the adhesive with a paint roller (minimum 3/8" nap), and allow to dry completely when a releasable installation is desired.

Open Time:

The adhesive will become transparent when completely dry. Drying time will depend on substrate porosity and ambient conditions. Higher humidity and lower temperatures will slow the drying time.

Coverage: 3/8" nap paint roller: 300 - 350 sq. ft./gal.

Shelf Life: 1 year from manufacturing date.

This product is not photochemically reactive as defined by California Rules 102 and 443. VOC content is below that established by California SCAQMD Rule 1168.

04/24/09

Warranties

These warranties are subject to the Warranty Terms and Conditions provided at the end of this document and apply only to commercial modular carpet products sold by Milliken. Details about the test methods supporting these warranties are available upon request.

WARRANTIES APPLICABLE TO ALL MILLIKEN COMMERCIAL MODULAR PRODUCTS:

(Exceptions are noted under Specialty Product Limited Warranties below.)

FACE FIBER WEAR

Milliken warrants that the carpet will lose no more than ten percent (10%) of its face fiber by weight during the Lifetime of the carpet. If the carpet is installed on stairs, this warranty will be limited to five years. A claim against this warranty requires the submittal of a sample (one square yard minimum) of unused attic stock and a like-size piece of carpet from the area that is believed to be worn beyond the terms of this warranty. These samples will be submitted to an independent testing lab for verification.

STAINING/SOILING RESISTANCE (StainSmart®)

Milliken warrants that carpet which is treated with StainSmart will resist staining and soiling during the Lifetime of the carpet.

COLOR PATTERN PERMANENCY

Milliken warrants that the carpet will exhibit no pattern loss during the Lifetime of the carpet. If the carpet is installed on stairs this warranty will be limited to five years.

DELAMINATION OF BACKING

Milliken warrants that the backing of the carpet will not delaminate during the Lifetime of the carpet.

EDGE RAVEL

Milliken warrants that the carpet will exhibit no edge ravel or "zippering" during the Lifetime of the carpet.

TUFT BIND

Milliken warrants that the carpet will maintain its tuft bind integrity during the Lifetime of the carpet.

FLOOR COMPATIBILITY

Milliken warrants that the carpet will not cause a reactivation of old adhesives due to plasticizer migration during the Lifetime of the carpet.

ANTISTATIC

Milliken warrants that the carpet will not generate static shock greater than 3.5 kilovolts during the Lifetime of the carpet.

ANTIMICROBIAL PROTECTION (AlphaSan®)

Milliken warrants that the AlphaSan antimicrobial agent will remain active during the Lifetime of the carpet. AlphaSan inhibits microbial activity that can contribute to deterioration in the carpet backing.

FLAMMABILITY

Milliken warrants that at the time of shipment the carpet will comply with the applicable provisions of the Federal Flammable Fabrics Act for carpet used as floor covering in commercial installations. Milliken does not represent that this or any other carpet fabric will not burn or generate smoke under actual fire conditions.

The Milliken logo is written in a blue, cursive script font.

CUSHION RESILIENCY

Milliken warrants that the modular carpet with attached cushion will retain 90% of its cushion resilience during the Lifetime of the modular carpet.

DIMENSIONAL STABILITY

Milliken warrants that the modular carpet will maintain its dimensional stability during the Lifetime of the modular carpet.

FLOOR RELEASE

Milliken warrants that the initial installation of the modular carpet will release from the floor during the Lifetime of the modular carpet.

MOISTURE RESISTANCE

Milliken warrants that the modular carpet will resist moisture penetration during the Lifetime of the modular carpet. This warranty does not include moisture penetration at the seams of modular carpet.

SPECIALTY PRODUCT LIMITED WARRANTIES:**TRACTIONBACK® MODULAR CARPET**

Milliken warrants that at the time of shipment, modular carpet with TractionBack will maintain sufficient bond strength to hold the modular carpet in place under normal foot traffic use for ten (10) years.

ISOS MODULAR CARPET

Milliken warrants that the 100% wool modular carpet, Isos, will lose no more than ten percent (10%) of its face fiber by weight for ten (10) years.

ENTRY BARRIER CARPET (CLEANSWEEP)

Milliken warrants that the CleanSweep entry barrier carpet will lose no more than ten percent (10%) of its face fiber by weight for five (5) years.

BLEACH RESISTANCE (ColorSeal®)

Milliken warrants that carpet treated with ColorSeal will resist color loss attributable to spills of ten percent (10%) bleach solution and other oxidizing agents during the Lifetime of the carpet.

WARRANTY TERMS AND CONDITIONS:

The following terms and conditions (the 'Warranty Terms and Conditions') apply to all warranties made by Milliken & Company ("Milliken") for commercial carpet sold by Milliken Design, Inc. These Warranty Terms and Conditions and related warranties do not apply to non-commercial installations.

The warranties provided herein are in lieu of any and all other warranties, express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose. These warranties are subject to the limitations and exclusions set forth in these Warranty Terms and Conditions and in the individual warranties. These warranties only apply to carpet installed in accordance with Milliken's then current published instructions for installation and orientation (which are specific for each carpet product), installed in an indoor commercial environment and properly maintained in accordance with current, published Milliken specifications. These warranties shall not apply to carpet which has been placed in storage for extended periods, exposed to temperature extremes, or bent or deformed. Additionally, these warranties do not cover damage arising from any use that is different from the normal, intended use of carpet, including, but not limited to, (i) damage caused by chlorinated or any other solvent-based cleaning agents; (ii) damage caused by exposure to substances or

The logo for Milliken, featuring the word "Milliken" in a stylized, handwritten blue font.

contaminants which degrade or destroy color in carpet; (iii) damage caused by use of inappropriate maintenance methods or unapproved maintenance service providers, (iv) damage caused by, sharp objects and the like; (v) damage caused by the installer or the workmanship of the installer (if not installed by Milliken or Milliken Design, Inc.); and (vi) damage arising from the condition of the sub-floor (i.e. undue moisture). Milliken is not responsible for any change or modification to the carpet which might occur after it leaves Milliken's premises, including, but not limited to the presence of chemicals or materials which were not specified as components of the carpet. In no event shall Milliken be liable for incidental or consequential damages, whether in contract, warranty, negligence, strict liability, or otherwise. Service properties such as pile shading, pile crushing, being used as a traffic lane, wear or abrasion and other similar properties are not defects and such properties are not warranted.

Warranty periods, whatever the length and wherever referenced in this document, begin at the date of the applicable invoice.

Milliken recommends and endorses the **MilliCare® Textile and Carpet Care** service network as the best way to maintain and prolong the life of Milliken Commercial Carpet.

Purchaser's exclusive remedy for any and all losses or damages resulting from defective carpet shall be the repair or replacement of the carpet in the affected area, as determined by Milliken in its sole discretion. The selected remedy shall reflect the previous usage of the carpet and may take the form of credit toward future purchases. This shall be the purchaser's sole remedy. If replacement is chosen by Milliken as the appropriate remedy, Milliken will not be responsible for additional expenses including but not limited to: (i) labor, (ii) the removal of furniture, partitions, temporary walls and the like which are located on, above, or around the carpet installation, or (iii) any ancillary fees or costs, including, but not limited to building charges for use of elevators, air conditioning, utilities, after hours access or charges for freight, shipping or handling. These additional expenses shall be borne by the purchaser. Replacement will be made with a current, comparable Milliken carpet.

Warranty coverage is limited to the original purchaser of the carpet (which includes anyone purchasing carpet through a dealer), and is not transferable. Milliken requires the original sales receipt or other documentation as proof of warranty coverage.

"Lifetime" is defined as the period of time that the original purchaser of the carpet chooses to keep the carpet on the floor at the original installation site. Lifetime warranties only apply to carpet invoiced after February 1, 2005. For carpet invoiced prior to February 1, 2005 the warranties then in effect apply.

OBLIGATIONS OF PURCHASER-OWNER:

1. Purchaser/Owner must submit notice of all claims under this warranty within the warranty period and comply with any other obligations under the warranty.
2. Claims must be submitted in writing and delivered to your Milliken Sales Representative:

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3. All areas in which carpet is to be replaced must be cleared of all furnishings and other items or materials that had been installed over the affected carpet at Purchaser/Owner's expense.
 4. For information about your Milliken Sales Representative or for answers to questions about the warranties and/or test procedures supporting these warranties please contact Milliken at:
Phone number: 1-800-528-8453 (Option 2 @ prompt for Quality Assurance)
E-mail: hospitalitycontractqafax@milliken.com Toll Free Fax Number: 1-866-503-6815

OBLIGATIONS OF MILLIKEN:

Milliken will, within ten (10) business days of receipt of such written notice, designate a representative to promptly respond and arrange an inspection of the carpet.



SAFETY DATA SHEET



MILLIKEN LVT ADHESIVE

Version 1.1	Revision Date: 07/23/2015	MSDS Number: F000000678	Date of last issue: 07/22/2015 Date of first issue: 07/22/2015
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SECTION 1. IDENTIFICATION

Product name : MILLIKEN LVT ADHESIVE

Product code : F000000678

Manufacturer or supplier's details

Company name of supplier : Milliken

Address : 924 Milliken Road
Spartanburg SC 29303

Telephone : (864) 472-9047

Telefax :

Emergency telephone number : (CHEMTREC): (800) 424-9300 (CHEMTREC International):
(703) 527-3887 Industrial Health/Spill Emergency: (706) 277-
1300 Danny Welch (ehs@trcc.com)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air in case of accidental inhalation of vapours.
Oxygen or artificial respiration if needed.
Call a physician or poison control centre immediately.

In case of skin contact : Wash off immediately with soap and plenty of water while
removing all contaminated clothes and shoes.
If skin irritation persists, call a physician.

In case of eye contact : In case of eye contact, remove contact lens and rinse imme-

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diately with plenty of water, also under the eyelids, for at least 15 minutes.
Keep eye wide open while rinsing.
Seek medical advice.

If swallowed : Do not induce vomiting without medical advice.
If conscious, drink plenty of water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Foam
Carbon dioxide (CO₂)
ABC powder
Water mist

Specific hazards during fire-fighting : Burning produces irritant fumes.
Exposure to decomposition products may be a hazard to health.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Hazardous decomposition products due to incomplete combustion

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
Exposure to decomposition products may be a hazard to health.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Material can create slippery conditions.
Use non-slip safety shoes in areas where spills or leaks can occur.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.

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Do not allow contact with soil, surface or ground water.
Do not allow uncontrolled discharge of product into the environment.

Methods and materials for containment and cleaning up : Dam up.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up and shovel.
Pick up and transfer to properly labelled containers.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : The product is not flammable. No special protective measures against fire required.

Advice on safe handling : Wear personal protective equipment.
Handle with care.
Take care to avoid waste and spillage when weighing, loading and mixing the product.

Conditions for safe storage : No smoking.
Keep in properly labelled containers.
Observe label precautions.
Keep containers tightly closed in a dry, cool and well-ventilated place.

Materials to avoid : Do not freeze.
Keep away from food and drink.
Keep away from tobacco products.

Recommended storage temperature : 4 - 43 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).
Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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Use NIOSH approved respiratory protection.

Hand protection

Material

: Impervious gloves

Eye protection

: Safety glasses with side-shields
Tightly fitting safety goggles
Face-shield

Skin and body protection

: Chemical resistant apron
Footwear protecting against chemicals
Skin should be washed after contact.
Change working clothes after each workshift.

Protective measures

: Avoid contact with skin.
When using do not eat, drink or smoke.
Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

: Do not smoke.
Keep away from food and drink.
Avoid contact with skin, eyes and clothing.
Change working clothes after each workshift.
Remove and wash contaminated clothing and gloves, including the inside, before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: paste

Colour

: white

Odour

: mild, characteristic

pH

: 7.5 - 8.5

Melting point/range

: No data available

Boiling point/boiling range

: 212 °F

Flash point

: > 212 °F

Evaporation rate

: No data available

Vapour pressure

: No data available

Relative vapour density

: not determined

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Density : 1,200 - 1,250 kg/m³

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : Not applicable

Partition coefficient: n-octanol/water : No data available

Explosive properties : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable

Possibility of hazardous reactions : Stable under recommended storage conditions.

Conditions to avoid : Protect from frost.

Incompatible materials : Oxidizing agents
Strong acids and strong bases

Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Remarks: This information is not available.

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

Skin corrosion/irritation

Product:

Remarks: This information is not available.

Serious eye damage/eye irritation

Product:

Remarks: This information is not available.

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Respiratory or skin sensitisation

Product:

Remarks: This information is not available.

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates :
Remarks: No data available

Toxicity to algae :
Remarks: No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Dispose of in accordance with local regulations.

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Can be landfilled or incinerated, when in compliance with local regulations.

Contaminated packaging : Clean container with water.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA All components of this product appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency (EPA) under the authority of the Toxic Substances Control Act (TSCA).

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Milliken

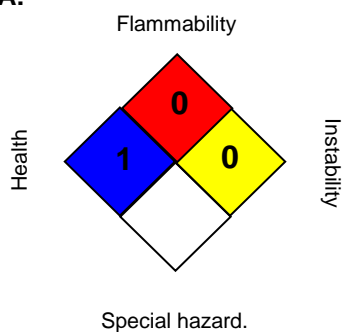
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SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 07/23/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

Print Date: 02-25-2016

CHAPCO SAFE-SET 400
825676PM**SAFETY DATA SHEET**

REVISION DATE: 02-25-2016

SUPERSEDES: 04-13-2015

SECTION 1: IDENTIFICATION OF THE PRODUCT AND SUPPLIER**PRODUCT INFORMATION**

PRODUCT: CHAPCO SAFE-SET 400
PRODUCT DESCRIPTION: Mastic
INTENDED USE: Adhesive
PRODUCT IDENTIFIER: 825676PM

COMPANY INFORMATION

H.B. Fuller Construction Products Inc.
1105 S. Frontenac Street
Aurora, IL 60504
Phone: 1-800-552-6225

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION**GHS Hazard Symbols:**

GHS Signal Word: Warning
GHS Classification: Serious Eye Damage/Eye Irritation Category 2
GHS Hazard Phrases: Causes serious eye irritation.
GHS Precautions:
Safety Precautions: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
First Aid Measures: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	PERCENT	Classification	Note
Calcium carbonate	471-34-1	50 - 70		* (see below)
Butyl acrylate/vinyl benzene polymer	25767-47-9	10 - 30	Eye Irrit. 2; H319	
Crystalline silica	14808-60-7	0.1 - 1	Carc. 1A; H350 STOT RE 1; H372	* (see below)

*This product contains one or more materials that may be hazardous when present as an airborne dust. During normal handling of the product, the material is encapsulated within the product and will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

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Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Use water spray, foam, dry chemical or carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Material will burn in a fire.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred.

METHODS FOR CLEAN-UP: Scrape up and place in disposal container.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling:

Avoid contacting and avoid breathing the material. Use only in a well ventilated area.

Storage:

Store in a cool, dry place. Protect from freezing.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**EXPOSURE LIMITS:**

Chemical Name	Note	ACGIH EXPOSURE LIMITS	OSHA PEL
Calcium carbonate	* (see below)	No data available.	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Crystalline silica	* (see below)	0.025 mg/m ³ TWA (respirable fraction)	((250)/(%SiO ₂ + 5) mppcf TWA (respirable)); ((10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable)); ((30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust))

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*This product contains one or more materials that may be hazardous when present as an airborne dust. During normal handling of the product, the material is encapsulated within the product and will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

ENGINEERING CONTROL METHODS:

VENTILATION:	Use local exhaust ventilation or other engineering controls to minimize exposures.
EYE PROTECTION:	Wear safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.
SKIN PROTECTION:	Not normally required. Wear chemically resistant gloves to prevent prolonged or repeated contact.
GLOVES:	Nitrile
RESPIRATORY PROTECTION:	Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Semi-solid
COLOR:	White
ODOR:	Odorless
ODOR THRESHOLD:	Not established
pH:	9.1
FREEZING/MELTING POINT (deg. C):	Not established
BOILING POINT (deg. C):	Not established
FLASH POINT:	Non flammable
EVAPORATION RATE:	Not established
FLAMMABILITY:	Not a flammable solid or gas
UPPER EXPLOSIVE LIMIT (% in air):	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
WEIGHT PER GALLON (lbs.):	10.90
SPECIFIC GRAVITY:	1.300
SOLUBILITY:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
AUTOIGNITION TEMPERATURE:	Not established
DECOMPOSITION TEMPERATURE:	Not established
VISCOSITY:	No data available.
SOLIDS (% by weight):	70.5
VOC, weight percent	0.25
VOC, U.S. EPA Method 24, less water and exempt solvents (theoretically determined)	5g/liter of material

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STABILITY: Stable under normal conditions.
CHEMICAL INCOMPATIBILITY: Not established
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION**Component Toxicity / Toxicology Data:**

COMPONENT NAME	LD50/LC50
Diethyleneglycol dibenzoate	Oral LD50 Rat 2,830 mg/kg

This product is a mixture. Unless noted, the information below is based on components.

Skin corrosion / irritation: Can cause minor skin irritation, defatting, and dermatitis.

Serious eye damage / irritation :Can cause moderate irritation, tearing and reddening.

Respiratory / skin sensitization: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: Contains a material that may cause cancer.

Reproductive toxicity: No data available.

Specific target organ toxicity-single exposure: No data available.

Respiratory irritation / Narcotic effects: No data available.

Specific target organ toxicity-repeated exposure: No data available.

Target organs potentially affected by exposure: Lungs

Aspiration hazard: Not an aspiration hazard.

Medical Conditions Aggravated by Exposure: Lung disease

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available for this product.
MOBILITY: No data available.
PERSISTENCE: No data available.
BIOACCUMULATION: No data available.

This product has not been tested for ecological effects. Relevant information for components is listed below:

Component:	Ecotoxicity values:
No data available.	Acute Toxicity (Fish): Acute Toxicity (Daphnia): Acute Toxicity (Algae):

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

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CHAPCO SAFE-SET 400
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Consult Bill of Lading for transportation information.

US DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION**INVENTORY STATUS**

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.

EUROPEAN REACH: As a result of the introduction of REACH into Europe, this product cannot be imported into Europe unless the REACH requirements are met.

AUSTRALIA AICS: This product is in compliance with the Australian Inventory of Chemical Substances requirements.

KOREAN TCCL: This product is in compliance with the Korean Existing Chemicals List requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at reg.request@hbfuller.com to request an export review.

This product contains a chemical substance that is subject to a Significant New Use Rule (SNUR) under Section 5(a)(2) of TSCA: .alpha.(Nonylphenyl)-.omega.-hydroxy-poly(oxy-1,2-ethanediyl)
.alpha.-(4-Nonylphenyl)-.omega.-hydroxy-poly(oxy-1,2-ethanediyl)

79 FR 59186, Oct 1, 2014 (Proposed rule)

FEDERAL REPORTING**EPA SARA Title III Section 313**

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
---------------	------	---

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
Quartz (Carcinogen)	14808-60-7	0.1 - 1
Dibromoacetonitrile (Carcinogen)	3252-43-5	0.001 - 0.01
Ethyl acrylate (Carcinogen)	140-88-5	< 10 ppm
Acrylamide (Carcinogen)	79-06-1	< 10 ppm
1,4-Dioxane (Carcinogen)	123-91-1	< 10 ppm
Acrylamide (Developmental toxin)	79-06-1	< 10 ppm
Acrylamide (Male reproductive toxin)	79-06-1	< 10 ppm

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Substances of Very High Concern (SVHC) Content:

Unless listed below, this product does not contain SVHC's at 0.1% or greater, as of the version date of this SDS.

4-Nonylphenol, ethoxylated

4-Nonylphenol, ethoxylated

SECTION 16: OTHER INFORMATION

SDS VERSION DATE: 02-25-2016

This Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 2 FLAMMABILITY -- 1 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to H.B. Fuller Construction Products, Inc. from its suppliers, and because H.B. Fuller Construction Products, Inc. has no control over the conditions of handling and use, H.B. Fuller Construction Products, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and H.B. Fuller Construction Products, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Construction Products, Inc. products to comply with all applicable federal, state and local laws and regulations.

JOHNSONITE WALL BASE AND TRANSITIONS:

This information provides clarification regarding the need of Safety Data Sheets for the products that Johnsonite manufacturer and distributes in North America. According to the Hazard Communication Standard of the Occupational Safety and Health Administration, SDS's are required for all hazardous chemicals; however, the Standard specifically exempts all "Articles" from this requirement [29 CFR 1910.1200(b)(6)(v)].

"Articles" by definition of the Standard, "means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees."

We wish to advise you that all of Johnsonite's Rubber Tile, Rubber and Vinyl Stair Treads and Nosings; TightLock™, Standard, and Vent Cove Wall Base; Terra-Turf Rubber Tile, Resilient Mouldings, all other extruded or molded flooring products and accessories in addition to Johnsonite's Tarkett Collection which includes Acczent, Granit and Granit SD, I.D. Premier, Harmonium Linoleum xF™, Melodia, Optima, Safe-T Sheet, Square, Training, Toro SC, Azrock Vinyl Composition Tile, Vinyl Enhanced Tile, and Solid Vinyl Tile are "Articles" according to the above definition, and therefore are exempt from the SDS requirements.

In addition, all of Johnsonite's extruded and molded flooring products and accessories are not reportable under SARA III, Sections 311 thru 313. The Superfund Amendments and Reauthorization Act exempts substances present as a solid in any manufactured item, to the extent exposure of the substance does not occur under normal conditions of use.

Safety Data Sheets are required, under the Hazard Communication Standard of OSHA. Should you require additional information or clarification regarding this subject, please contact Johnsonite's Technical Department at 1-800-899-8916 x9297

Safety Data Sheet acc. to OSHA HCS

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1 Identification

- **Product identifier**
- **Trade name:** K-91 AR Tack Set Vinyl Tile & Plank Adhesive
- **Relevant identified uses of the substance or mixture.** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Karndean Design Flooring
 1100 Pontiac Court
 Export, PA 15632
 Telephone Number: (724) 387-6532
- **Information department:** Environment protection department.
- **Emergency telephone number:**
 ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.
 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**
 The product does not meet the criteria for classification as hazardous under the GHS and 29 CFR 1910.1200
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
PHYSICAL HAZARD	0	Physical Hazard = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Water Base Adhesive

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· **Hazardous components:** No hazardous/reportable components.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:**

Rinse out mouth with water. Drink 1 - 2 glasses of water but **DO NOT** induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Seek medical treatment.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray.

Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** Dried solids can burn and release toxic fumes and vapors.

· **Advice for firefighters**

Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

· **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste in accordance with federal state and local regulations.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store above 40F.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect product from freezing.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment (see listings below)**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
Nitrile rubber, NBR
Chloroprene rubber, CR
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.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

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Safety glasses with side shields.

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Paste
Color:	Off White
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value at 20 °C (68 °F): 8.7

· Change in condition

Melting point:	Undetermined.
Boiling point:	100 °C (212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Flammable limits:

Lower:	Not Determined
Upper:	Not Determined

· Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

· Specific gravity at 20 °C (68 °F): 0.98 g/cm³ (8.178 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Not soluble

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	0.0 %
VOC (Per EPA 24)	not available GMS/L

Solids content: Not available

· Other information: No further relevant information available.

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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Temperatures below 40F (4.4C)
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Hydrocarbons

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** May irritate the skin.
 - **on the eye:** May irritate the eye.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | not regulated |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **New Jersey Right-to-Know List:**

None of the ingredients is listed.

· **New Jersey Special Hazardous Substance List:**

None of the ingredients is listed.

· **Pennsylvania Right-to-Know List:**

None of the ingredients is listed.

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

· **Water hazard class:** Generally not hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

Although the information and recommendations set forth in this SDS [SDS] are presented in good faith and are believed to be correct as of the date of this SDS [SDS], the supplier/manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will the supplier/manufacturer be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS [SDS].

· **Department issuing SDS:** Environment protection department.

· **Creation Date:** 10/18/2016

· **Date of preparation / last revision** 10/18/2016 / -

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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*ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit*

USA

Coir Palm & Coir Revolution®

P/6603

Manufacturing	
ISO 14001 Certified	Milliken's Environmental Management System is deployed in all global manufacturing facilities. Each facility is certified to ISO 14001 through third party auditors. This system assures continual improvement and monitoring of all key environmental impact categories and processes.
OSHA VPP Sites	The Voluntary Protection Program (VPP) promotes effective worksite-based safety and health. In the VPP, management, labor, and OSHA establish cooperative relationships at workplaces to implement a comprehensive safety and health management system. OSHA VPP approval indicates official recognition of the outstanding efforts of employers and employees who have achieved exemplary occupational safety and health. All Milliken U.S. manufacturing locations are OSHA VPP sites.
Corporate Social Responsibility Actions	
Carbon Negative Status	Carbon is one of the leading contributors to greenhouse Gas (GHG) emissions. Milliken achieves carbon negative certification from the respected Leonardo Academy without purchased Renewable Energy Credits based on renewable energy, carbon sequestration and energy reduction.
ECO 360	Eco 360 is Milliken's brand for sustainable products that meet rigid manufacturing standards with DfE and LCA protocols. It applies to all carpet collections.
Ecountability	Milliken has applied strict resource conservation guidelines to all operations for more than a century. These guidelines and sustainable policies are the foundation of our Milliken & Company Sustainability Process.
EPA Partnerships	The U.S. Environmental Protection Agency regulates, protects and educates concerning the environment. It offers many partnership opportunities for business to measure and reduce environmental impacts. Milliken participates in with SmartWay® and Landfill Methane Outreach Program (LMOP).
Green Energy	Conventional energy sources like oil, coal and natural gas are being replaced by greener sources like wind, solar and water. Milliken seeks renewable energy to meet its needs using methane and hydropower.
Reduced Packaging	Reduced packaging lowers waste and associated costs related to energy and transportation. Working with customers Milliken has saved more than 90 million pounds of cardboard by shipping modular carpet on pallets versus boxes, reducing packaging 91% since 1991.
Reduced Environmental Footprint	The amount of depletable raw materials and nonrenewable resources consumed to make products, added to the wastes and emissions generated in the process determine an organization's environmental impact or footprint. Through conservation and efficiency Milliken & Company has reduced its global eco-footprint 48% over the last 15 years. The Floor Covering Division has reduced its global eco-footprint by 85% during the same period.
Trees for All	Trees have long been a passion for Milliken & Company. This initiative educates the supply chain, enhances communities, and reduces GHG impacts for future generations via tree planting; partnering to nurture trees; adding shade for playground safety; and recognizing sustainable actions.
Zero Waste	All Milliken plants operate with a goal of 100% diversion or zero waste to landfill. The company has maintained zero waste from U.S. carpet manufacturing since 1999.



Certifications	
Carbon Neutral	Milliken professionally managed forests sequester more carbon dioxide than our facilities emit worldwide. All carpet collections are certified carbon neutral by the Leonardo Academy without purchased credits.
CRI Green Label Plus	CRI's Green Label Plus program for carpet and adhesives sets scientifically based standards for Indoor Air Quality (IAQ) to ensure that customers are purchasing low emitting products. All Milliken carpets meet the criteria for Green Label Plus certification. More than 90 percent of Milliken products are rated for "Severe Wear" (highest rating for appearance retention) by the Carpet and Rug Institute.
NSF 140 – 2007e	The ANSI/NSF 140-2007 Sustainable Carpet Assessment (NSF-140) is intended for commercial, hospitality, and similar carpets. Reliable third-party verification from reputable auditors provides assurance that product expectations are met. California standards have been incorporated into the final ANSI/NSF 140-2007 standard at Platinum certification levels. All Milliken commercial carpet collections are certified under the NSF 140-2007 Sustainable Carpet Assessment Standard.
Partnership for a Sustainable Georgia	The Partnership for a Sustainable Georgia assists Georgia businesses in using continuous improvement tools to reach better environmental results and a better bottom line. Milliken Floor Covering is a Gold Partner with Sustainable Georgia.
SMaRT®	SMaRT is a consensus national standard developed by MTS. SMART is approved as part of the LEED Green Building Rating System based on compliance with comprehensive sustainable product certification criteria. All Milliken commercial carpet collections are certified to SMaRT Consensus Sustainable Product Standards.
Technologies	
AlphaSan®	AlphaSan® provides long-lasting antimicrobial protection that inhibits odors caused by mold and mildew. AlphaSan is a safe and effective technology that demonstrates efficacy against all bacteria.
ColorSeal®	ColorSeal® bleach resistance assures appearance retention under adverse conditions.
Comfort Plus® ES and ESP backing	Milliken modular carpet customers have the option of ES backing with NSF-140 Gold ranking or ESP backing with increased post-consumer content and NSF-140 Platinum ranking.
MilliCare®	MilliCare® Textile and Carpet Care, a dry, non-toxic cleaning system, removes dirt and up to 99% of pollutants and harmful VOCs (Volatile Organic Compounds) when used with a properly functioning HVAC system. The MilliCare system also meets the California Code for low VOCs, plus Green Seal and CRI Seal of Approval certifications. MilliCare may contribute to LEED.
PVC-free systems	Concerns have increased regarding potential environmental and health effects related to polyvinyl chloride or PVC. Milliken introduced PVC-free carpet tiles in 1986.
StainSmart™	StainSmart™ stain and soil resistance technology is applied during manufacturing, becoming an integral component of the carpet that ensures long-term appearance retention.
TractionBack®	Indoor Air Quality (IAQ) is identified as one of the top health issues related to buildings. Bio-based TractionBack® adhesive-free modular installation improves indoor air quality by eliminating VOC off gassing. The friction coating is applied to modular carpet backing during manufacturing and secures tiles in place without wet adhesives, floor sealers or primers.

Affiliations	
ASBE	The Alliance for Sustainable Built Environments represents global companies recognized for leadership in sustainability and committed to delivering high performance sustainable solutions for the built environment. Milliken is a founding member.
CARE	Carpet America Recovery Effort SM (CARE), a voluntary initiative of the carpet industry and government, focuses on developing carpet reclamation and recycling methods to prevent carpet from burdening landfills. Milliken is an actively supports this industry effort.
CRI	The Carpet and Rug Institute (CRI) is the science-based source for information about carpet and rugs. As a founding member, Milliken continues to support industry efforts to provide fact-based education.
EPA LMOP	The U.S. EPA's Landfill Methane Outreach Program (LMOP) is a voluntary assistance and partnership program that promotes the use of landfill gas as a renewable, green energy source. Milliken partners with the City of LaGrange to harvest methane from the local landfill and expects to launch its second project by year end.
EPA SmartWaySM	SmartWay SM is a voluntary collaboration between the U.S. EPA and the freight industry to increase energy efficiency while significantly reducing greenhouse gases and air pollution. Milliken joined the EPA SmartWay Transportation Partnership in 2006.
GFC	The Georgia Forestry Commission (GFC) provides leadership, service, and education in the protection and conservation of Georgia's forest resources. Milliken partnered with GFC to launch Making the Shade, a program to increase Georgia's playground safety by adding shade trees.
IFMA	Established in 1980, the International Facility Managers Association (IFMA) is dedicated to promoting excellence in the professional management of the built environment. Milliken is a founding Corporate Sustaining Member of IFMA.
IIDA	The International Interior Design Association (IIDA) was founded in 1994 to create an association that would represent interior designers worldwide. Milliken Contract maintains the highest level of industry membership status.
MTS	Sustainable products provide environmental, social and economic benefits while protecting public health, welfare, and environment over their full commercial cycle, from the extraction of raw materials to final disposition. MTS develops standards for sustainable products.
National Arbor Day Foundation	The National Arbor Day Foundation is a nonprofit, environmental education organization of nearly one million members, with a mission to inspire people to plant, nurture, and celebrate trees. With a passion for trees, Milliken has a long history of partnering with NADF.
NEWH	Founded in 1984, the Network of the Hospitality Industry (NEWH) is the premier networking resource for the hospitality industry, providing scholarships, education, leadership development, recognition of excellence, and business development opportunities. Milliken supports the organization and is represented on the sustainability committee.
Roots & Shoots	Roots & Shoots makes positive change for communities, animals and the environment with tens of thousands of young people in almost 100 countries. Milliken supports tree planting programs in Asia.
USGBC and WGBC	The non-profit U.S. Green Building Council is committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings. Milliken is a founding member of USGBC and supports World Green Building Council.

LEED Contributions	LEED-NC	LEED-EB	LEED-CI
Materials Credit 2 – Construction Waste Management Divert construction, demolition and other debris from landfill disposal. Milliken's No Carpet to Landfill Pledge supports this credit and can contribute.	✓	✓	✓
Materials Credit 4 – Recycled Content Milliken carpet with pre-consumer and post-consumer content can contribute to this credit.	✓	✓	✓
Materials Credit 5 – Regional Materials Raw material extraction locations and finished product manufacturing within regional areas can contribute to this point.	✓	✓	✓
Materials Credit 4.1 – Low Emitting Materials All Milliken carpet is certified to CRI – Green Label Plus and delivers the point associated with this credit.	✓	✓	✓
Materials Credit 4.3 – Low Emitting Materials All Milliken adhesives meet the requirements of the SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168 - ADHESIVE AND SEALANT APPLICATIONS and contribute to this credit.	✓	✓	✓
Design in Innovation Milliken products are third party certified by NSF 140 and SMaRT as Sustainable Products. Both of these certifications have been recognized as Design in Innovation credits and may be applicable to your project. All products are also third party certified as Carbon Neutral products.	✓	✓	✓



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This cushion-back carpet tile product is covered by one or more patents, published applications and/or patents pending.

