I. Before you begin a Rubberflex installations...

Good work habits require on-site installers to review all safety and health information available. This includes the review of:

- A. Material Safety Data Sheets (MSDS)
- B. Labels
- C. Specifications
- D. Instructions
- E. Other pertinent publications

#### II. Definitions

#### A. Grade Levels

- 1. Suspended—A suspended floor is one with a minimum of 18" of well ventilated air space below.
- 2. On Grade—An on-grade floor is one in direct contact with the ground or over a fill which is in direct contact with the ground. A slab on ground level is an example of this.
- 3. Below grade—A below grade floor is partially or completely below the surrounding grade level in direct contact with the ground or over a fill which is in direct contact with the ground.

#### B. Subfloors and underlayments

- 1. Subfloor—A subfloor is selected for structural purposes and is the substrate for the underlayment.
- 2. Underlayment—The smooth surface used as the substrate for the floor covering.
- 3. Subfloor/underlayment combination—A surface which must meet structural requirements as well as have a smooth surface for the floor covering.

### III. Interior and exterior preparations

## A. Wood floor/subfloor preparations

- 1. Rubberflex installation on wood subfloors is recommended for suspended subfloors only. On grade or below grade installations will be at the discretion of the installer.
- 2. Subfloor panels, strip wood, board or plank-type subflooring may require covering with underlayment panels. (See Section III A.3.)
- 3. Wood underlayments should be structurally sound, designed for resilient flooring underlayment purposes, with a minimum thickness of 1/4". The panels should be clean, free of any dirt, wax, oil, or residue of adhesive.
- 4. All wood underlayments/sub-floors should be solid, well nailed at the joints, and free from movement.

5. Old wood floors to be covered should be stripped of paint or varnish; old adhesive must be removed (See caution, attachment D); or if the surface has a residue of adhesive, oil, or wax, it can be covered with an appropriate underlayment.

## B. Concrete floor preparation

- 1. The surface of a concrete subfloor should be dry, smooth, and structurally sound. It should also be free of depression, scale, or foreign deposits of any kind.
- 2. All concrete subfloors on or below grade level should be tested for moisture. (See section III.B.7.D)
- 3. Paint, varnish, oil, and wax should be entirely removed from all subfloors. (See caution, Attachment D).
- 4. Rough, uneven, cracked, score marked concrete floors should be cleaned and filled with an appropriate mastic or underlayment on any grade level. It is not recommended that expansion joints with elastometric fillers be covered either with underlayment or by flooring. Flooring installed across expansion joints often crack or buckle when the slabs move.
- 5. Dusty or chalky surfaces on a suspended concrete subfloor should be swept clean and sized with one coat of primer. A dusty concrete floor on or below grade can be a sign of alkali salts, and a moisture test should be conducted. (See Section III.B.7.D)
- 6. Scaly and cracked concrete may not be a good foundation for Rubberflex installation. The installer may consider applying a top coat of concrete.
- 7. Concrete drying/curing
  - a. Most curing compounds also reduce the adhesion of Rubberflex flooring and they should not be used on floors intended to be covered unless they are of a kind which is known not to interfere with adhesion. It is recommended that a bond test be conducted prior to complete installation. (See Section III.B.7.D)
  - b. Suspended concrete should be permitted to dry thoroughly with good ventilation and if possible, with heat. Rubberflex may be installed only after moisture tests prove the suspended concrete floor is sufficiently dry. (See Section III.B.7.D)
  - c. On-grade or below-grade concrete floors should have a moisture barrier installed to protect from ground moisture.
  - d. Bond and moisture tests are used to determine if the concrete is sufficiently dry as well as to determine the compatibility of the flooring adhesive to the concrete subfloor. Test areas should be selected adjacent to walls, columns, etc., and other light-traffic areas. Using the flooring material specified, install at least one panel using the adhesive recommended. If after 72 hours the bond material is secure, it may be concluded that the subfloor surface is dry and sufficiently clean of foreign material for satisfactory installation of Rubberflex flooring.
  - e. Several tests for moisture are available and may be used by the contractor and/or installer. These included but are not limited to:
    - 1. Delmhorst Moisture Test
    - 2. Protimeter Concrete Master
    - 3. Anhydrous Calcium Chloride Test.

- f. Where moisture is present, several methods for correcting this deficiency have been developed. These include but are not limited to:
- 1. Sodium silicates
- 2. Potassium silicates
- 3. Surface coatings
- 4. Vapor membranes
- 8. There are many available products that have been developed for use as floor fills that include cellular concretes, resin-reinforced self-leveling cement underlayments, and gyp-sum-based products. These are commonly recommended by the manufacturers or installers for leveling rough or uneven subfloors, or as toppings for otherwise unsuitable subfloor conditions. All recommendations and guarantees regarding their suitability and performance as underlayments for Rubberflex flooring must be the responsibility of the manufacturer and installer of the underlayment system used. It is recommended that Rubberflex flooring not be installed over gypsum based patches or underlayments that have been applied to on, or below, grade concrete or damp suspended concrete. (See Attachment C)
- 9. Because of joints between sections or concrete planks, this type of subfloor requires finishing with a concrete topping before Rubberflex flooring is installed. Trowelable underlayments are not satisfactory for smoothing preformed concrete subfloors.

## C. Existing Resilient Floors

- 1. Rubberflex flooring may be installed over most existing resilient flooring products providing the proper installation system is used for Rubberflex and the old resilient flooring meets the following.
  - a. It must not be textured or embossed enough to show through the new installation. Rubberflex that is 1/4" thick tends to prohibit the mirroring effect of the pattern being covered.
  - b. It is completely and firmly bonded.
  - c. It was properly installed over recommended underlayments and substrates also recommended as being suitable for Rubberflex flooring.
  - d. It must show no evidence of moisture, alkaline salts or hydrostatic pressure.
  - e. Waxes and other finishes should be removed.
  - f. Indentations and other finishes should be replaced or repaired.
- 2. If there is any doubt about the existing resilient flooring being acceptable as an underlayment, it should be covered with an appropriate wood underlayment or removed. (see Warning, Attachment D)

## D. Polymeric Poured (seamless) Floors

- 1. All seamless floors begin used as a subfloor for Rubberflex flooring must be well cured and free of any residual solvent, structurally sound, and well bonded to a concrete subfloor. Any loose or damaged areas must be completely removed and patched with an appropriate underlayment of patching compound.
- 2. There must be no history of moisture related problems.

- 3. Any "nubbly" texture should be removed by machine sanding. (see Section III.C.1.A) Do not use a skim coat of latex underlayment to smooth the surface as it will not adhere reliably to the pour-on floor.
- 4. Old floor finishes must be completely removed. Ensure substrate is completely dry if old finish is wet stripped.

#### E. Metal Floors

If Rubberflex flooring is to be installed on or over metal, a bond test should be conducted prior to complete installation or contact Centaur Floor Systems for additional information and recommendations.

#### F. Ceramic Tile, Terrazzo and Marble

- 1. Rubberflex flooring may be installed over ceramic tile, terrazzo, or marble subfloors above, on or below grade. They should be firmly bonded to a structurally sound substrate.
- 2. The floor must be cleaned of all paint, varnish, oil, wax and finishes. (see Caution, Attachment D) Glazed or very smooth surfaces should be abraded and badly fitted joints or cracks should be repaired. Badly worn floors or floors with low places should be repaired and/or leveled with an appropriate underlayment prior to installation.

## IV. Layout, Design and Installation

## A. General Specifications - Installation

Note: For all Rubberflex sheet flooring installations, normal resilient sheet flooring product installation practices should be followed. A staggered-joint method for layout and installation should be employed whenever practical. The flooring will follow the contour of the floor to be covered. The smoother the substrate, the better the finished floor.

- 1. Installation should not begin until the work of all other trades has been completed and the area cleared of extraneous materials. If the job requirements are such that the floor must be installed before other trades have completed their work, the installed flooring should be covered with a suitable protective covering.
- 2. For interior installation all rooms, Rubberflex flooring and adhesive should be maintained at a minimum temperature of  $70^{\circ}$  F (21.11C) for at least 24 hours before, during and 24 hours after installation.
- 3. For fully adhered installation—spread adhesive evenly and at the rate of coverage recommended by the adhesive manufacturer. Weights, such as sand bags, may have to be used on the edges, corners or seams of fully adhered installations while the adhesive cures.

## B. Rubberflex Sheet Flooring

- 1. Rubberflex sheet flooring may be installed in a loose lay format. Loose lay applications indoors are based on installer's recommendations and the end user's requirements. All Rubberflex flooring to relax fully if rolled for shipment. Reverse roll and allow to relax fully in a warm environment prior to installation is recommended.
- 2. Fully adhered indoor installation may use a two-part epoxy or an adhesive that has been tested and recommended to be used with Rubberflex flooring. (see Attachment A). The installer should perform, at a minimum, a bond test in the area of the flooring installation to ensure the adhesive selected will perform adequately under those conditions.
- 3. Fully adhered exterior installations requires the use of an approved two-part epoxy. (see Attachment A) The two-part Epoxy should be mixed and applied according to the adhesive manufacturer's recommendations and guidelines. allow sufficient time for installation to cure properly (see adhesive manufacturer's recommendations) prior to allowing foot traffic.
- 4. For loose lay exterior installations, the installer should consult with Centaur Floor systems for installation recommendations and specific guidelines prior to installing Rubberflex flooring.
- 5. Rubberflex flooring can be field cut utilizing a razor knife and a straight edge. Use caution whenever using razor knives or other similar cutting devices to prevent accidental injury.
- 6. Reducing strips, edge guards, and corner strips, manufactured from metal, vinyl, or rubber are approved and may be used at the discretion of the installer.
- 7. Game lines may be painted directly onto Rubberflex flooring using an appropriate game line paint for those purposes. For interior installations, a sealer/finish should be applied as soon as the game line paint has sufficiently dried.
- 8. To achieve tight seams, certain situations may dictate that it is necessary to trim the sides and/or ends or Rubberflex. when trimming Rubberflex, it is recommended that 1/8" thick flooring be double cut.
- 9. After adhesive and Rubberflex is in place, it is recommended that the entire installation be rolled using a 100 pound (45.36kg) flooring roller or a suitable substitute to embed the floor in the adhesive and eliminate trapped air. Weights, such as sand bags, may have to be used on the edges, corners, or seams of fully adhered installations while the adhesive cures. To ensure Rubberflex flooring makes contact with adhesive along walls, door casing, et., press firmly in place with a hand roller or with hand pressure and a cloth. It may be necessary to roll fully adhered Rubberflex installations more than once. when using slow setting adhesives such as epoxies, it may be necessary to roll the installation a second time with a 100 pound flooring roller within 2-4 hours after the initial rolling has been completed and before final adhesive set. This will help to ensure an even, consistent spread of adhesive and provide maximum bond.
- 10. Care should be taken when laying Rubberflex sheets onto the adhesive. Place edge next to the adjacent sheet first, taking care not to drag the sheet across the adhesive. Most adhe-

sives (when curing) have a memory which may cause the seam to open up during the adhesive curing process. C. Rubberflex Tiles 1. Rubberflex tiles for interior use can be installed as a loose lay application. for exterior use, tiles should be fully adhered using a two-part epoxy adhesive. (See Attachment A)

#### Attachment A

## **Adhesive Product Suggestions**

The following adhesives have been tested and found acceptable for use with Rubberflex flooring.

If these particular brand products are not available in your area, your local flooring distributor should be able to make suitable substitute recommendations. A bond test should be performed prior to installation in all cases!

Notice: It is important for you to become comfortable with whatever adhesive you choose for a particular job. All adhesives should first be tested by the installer to ensure it will be compatible and will work for that particular purpose and condition.

The performance and guarantee of the products used in preparation, testing, installation and maintenance of Rubberflex, during and after installation, remain with the manufacturer of said product and not Centaur Floor Systems.

Mapel Ultra/Bond G12 (2 part Epoxy) 708-364-4470 (USA) 514-662-1212 (CAN)

Chicago Adhesives Products Co.

Chapco 150 (2 part Epoxy) 800-621-0220

Canadian Chemical Coatings

Syntac 3405 (2 part Epoxy) Syntac 5762 (2 part Polyurethane) 514-692-8255

Synthetic Surfaces

Nordot #77F Adhesive (2 part Epoxy) Nordot #107K Adhesive (2 part Epoxy, fast set)

The following adhesives may only be used for interior installations and where moisture is not present.

**Interior Adhesive Guidelines** 

- Latex or acrylic-based rubber adhesive
- Air curing
- Water resistant characteristics
- Plasticizer resistant

• Clear-thin spread or release-type adhesives are not recommended

Advanced Adhesive Technology

AAT-1161 Universal Adhesive-Water Based)

(with or without cross linker)

800-228-4583

Para-Chem

Parabound M287 (Urethane/synthetic latex)

Fast setting latex adhesive)

800-825-4583

Dap Inc.

Durabond D-400 (Latex)

513-667-4461

Chicago Adhesives Products Co.

Chapco 299 (Premium Vinyl Tile Adhesive)

(Synthetic Acrylic Latex)

800-621-0220

#### Attachment B

# Sealer/Finish Product Suggestions—Interior use only

The following sealer/finishes have been tested and found acceptable for use with Rubberflex.

You may contact these manufacturers for distributor locations nearest you. They will also assist you with technical information and instructions for cleaning and maintaining their products. Product literature, MSDS, and brochure are also available by calling the number listed for that manufacturer.

It is recommended that the sealer/finish selected be tested prior to applying to ensure product meets with finished installation requirements.

The performance and guarantee of the products used in preparation, testing and installation and maintenance of Rubberflex, during and after installation remain with the manufacturer of said product and not with Centaur Floor Systems.

Taski Division N. Charleston, SC 800-827-5487

Lever Industrial Co.

"Taski Ultra) High solids "Taski Brilliant" High solids "Ombra" High solids

"First Step Sealer" Shine Maintainer only

#### Attachment C

# Underlayment, Patch and leveling Compound Manufacturers

The following list of manufacturers and their products are provided for information purposes only.

Ardex Pittsburgh, PA 412-264-4240

Self-leveling underlayments, patch, toppings-cementitious.

Donsal Charlotte, NC 800-334-0784

Polymer modified cement resurfacing compound, floor underlayment, vinyl patch.

Dependable Rocky River, OH 800-227-3434

Latex underlayment, polymer/Portland type underlayments, cementitious/gypsum patch.

Gyp-crete Hamel, MN 800-356-7887

Cementitious underlayments.

Hacker Industries Newport Beach, CA 800-642-3455

Gypsum concrete underlayments

Quikrete Atlanta, GA 404-634-9100

Self-leveling floor resurfacer, cementitious/special additives.

#### Attachment D

# **Cautions and Warnings**

#### **WARNING**

## A. Flooring that contains asbestos

- 1. Do not sand, dry scrape, bead blast or mechanically pulverize existing flooring, backing or lining felt. These products may contain asbestos fibers that are not readily identifiable. Avoid crating dust. Inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Smoking greatly increases the risk of serious bodily hard.
- 2. Numerous products, devices, and techniques have been recently introduced and/or recommended for the removal of resilient floor coverings. Before utilizing any work practice for resilient floor covering removal, it should be determined if the work practice meets all applicable regulations or standards including those of the Occupational Safety and Health Administration (OSHA) for occupational exposure to asbestos.

## B. Adhesives containing asbestos

- 1. Some in-place asphaltic adhesives may contain asbestos fibers that are not readily identifiable. In the removal of asphaltic "cutback" adhesives, do not use power devices which can create dust. The inhalation of asbestos dust may cause asbestosis or other serious bodily hard. Smoking greatly increases the risk of serious injury. Assume that all in-place asphaltic "cutback" adhesive contain asbestos.
- 2. Numerous products, devices, and techniques have been recently introduced and/or recommended for covering and/or removal or residual asphaltic "cutback" adhesives. Before utilizing any work practice for covering or removal of residual asphaltic "cutback" adhesives, it should be determined if the work practice meets all applicable regulations or standards including those of the Occupational Safety and Health Administration (OSHA) for occupational exposure to asbestos.

#### **CAUTION**

Certain paints may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state and local laws concerning lead paint abatement.