



Maintenance Guide for Poured in Place Resilient Rubber Surfacing

Because poured-in-place surfacing has many positive inherent features if installed correctly at the proper critical depth for the play equipment, it is important to keep it as near to installation quality as possible. These positive features may include proper, continuous impact attenuation; a level, accessible, firm, stable, and slip-resistant surface; proper porosity or drainage provisions; attractive surface color combinations, patterns and designs; and long-term durability.

The presence of foreign objects and deposits can quickly diminish these qualities. These include a wide range of items, from sand, dirt, and stones to leaves, tree sap, chewing gum, bird droppings, urine, blood, scuff marks, tar, and common park maintenance products such as gasoline or grease. The longer these items are left on the surfacing, the more damage they cause, so prompt maintenance is important.

Principal key to effective poured-in-place surface maintenance: Keep Loose Debris Off -

Loose debris such as sand, dirt, and small stones on top of unitary surfacing can reproduce slip hazards. In addition, fine particles can accumulate in porous openings and clog important drainage features of some surfaces, as can matting materials such as leaf litter. These particles can also be abrasive; they accelerate wear and shorten surface life. It is recommended that a regular periodic removal of this loose debris be done. It is best to vacuum porous surfaces to clear the permeable openings as well as removing top litter, but blowing can also be an effective means of achieving this. Dry sweeping or scrubbing will remove the loose litter, but can force more fine particles into porous openings of some surfaces. This should be done at least every two-three weeks, but may be necessary more often if local conditions warrant.

A basic routine maintenance equipment and supply kit for poured-in-place surfaces -

Maintenance divisions with several playgrounds that have unitary surfaces may find it useful to establish a standard routine maintenance kit for these areas. Here is a recommended list of equipment and supplies for such a kit:

- Lawn vacuum or blower for porous surfaces or soft-bristle push broom for non-porous surfaces
- Disposable rags
- Disposable gloves
- 2 cleaning and rinsing buckets
- 2 small reusable pump spray containers (for vinegar and hydrogen peroxide)
- Aerosol spray cleaner (Formula 409™ has been highly recommended)
Orange oil cleaner
- Liquid detergent
- Powder cleaning compound (Borax™ has been highly recommended)
- STPP (Sodium Tripolyphosphate)
- White Vinegar (5% acid; available at grocery stores)
- Hydrogen Peroxide (3% solution; available at drug stores)
- Paste or powder cleanser (Goop™ and Bon Ami™ have been highly recommended)

It is important that the maintenance division obtains the MSDS for each of these chemical products from the manufacturer, includes them in all chemical in-service training, and has them on file for future reference. The quantities of these cleaning products will depend upon the amount of unitary surfacing to be maintained.

Use the right cleaner for problem deposits -

Elbow grease is always useful, but it helps to use the right cleaner to remove problem deposits or spills on unitary surfacing. Briefly, here's what is recommended for the following problems on unitary surfacing:

Bird droppings or other excrement — Do not attempt to loosen any dry excrement that is stuck to the surfacing; this could cause disease-causing fungus in the deposition to become airborne. Wear disposable gloves. Remove any loose excrement. Scrub deposits with dampened Bon Ami™, Borax™ or STPP and then wash with a Borax™ or STPP solution. Soak up residue with disposable rags. Disinfect by spraying on hydrogen peroxide and let stand for at least two minutes, then spraying again with vinegar and let stand for at least two minutes. (Do not mix these together; spray separately for best results.) Soak up residue with disposable rags. Double rinse with clean water.

Blood — Wear disposable gloves. Remove and disinfect by spraying on hydrogen peroxide and let stand for at least two minutes, then spraying again with vinegar and let stand for an additional two minutes. Soak up residue with disposable rags. Double rinse with clean water.

Chewing gum — Apply dry ice (regular ice isn't as effective) to freeze the gum and chip it from the surface and remove it.

Gasoline — Wash with a detergent and water. Soak up with disposable rags. Double rinse with clean water.

Grass stains — Apply orange oil cleaner. Work in and soak up with disposable rags. Double rinse with clean water.

Moss / Algae / Mildew / Mold — Saturate with hydrogen peroxide and let stand for at least five minutes. Repeat using vinegar. Soak up with disposable rags. Double rinse with clean water.

Scuff marks — Scrub with dampened Bon Ami™, Borax™, or STPP. Double rinse with clean water.

Soda or juice — Saturate with Formula 407™. Work in and soak up with disposable rags. Then wash with a liquid detergent, Borax™ or STPP solution. Double rinse with clean water.

Tar / crayon / lipstick / tree sap / motor oil / grease — Apply one or more of the following: orange oil cleaner, Goop™, or Formula 407™. Work in and soak up with disposable rags. Then scrub with dampened Bon Ami™, Borax™ or STPP. Double rinse with clean water.

Urine / vomit / nasal discharge — Wear disposable gloves. Wash with a Borax™ or STPP solution. Soak up residue with disposable rags. Disinfect by spraying on hydrogen peroxide and let stand for at least two minutes, then spraying again with vinegar and let stand for an additional two minutes. (Do not mix these together; spray separately for best results.) Soak up residue with disposable rags. Double rinse with clean water.

Avoid harmful solvents and cleaning products -

The following are effective cleaning agents but they are not recommended on most unitary safety surfaces. They may be detrimental to the surfacing because, over time, they could break down the polyurethane binding component and may lead to de-plasticization of the EPDM rubber. Most are not environmentally friendly. Some also change the appearance of the cleaned area compared to the rest of the surface, or make the surface very slippery: Acetate, Ammonia, Benzene, Carbon tetrachloride, Chlorine bleach, Glycerin, Lighter fluid, Mineral spirits, Naphtha, Petroleum distillates, Turpentine, WD40, Petroleum Jelly

Maintenance for Snow and Ice Conditions -

To remove ice or snow, Calcium Chloride is an acceptable solution. Please follow the manufacturer's instructions for proper use.

The information provided here is condensed from *Maintaining Safe Play*, the course manual of the new NPSI Playground Maintenance Service Program. Course availability, locations, and schedules will be posted later this fall on the NRPA website www.nrpa.org under "Education/training".