Safety Talk

Personal Protective Equipment

While there is a very wide variety of personal protective equipment (PPE) that you may be called-upon to wear by your employer for the job risks you may encounter when working in a marina, there are some that are critical for a majority of tasks that are common to this work environment. We will address each of the more common PPE types here.

Foot Protection

One of the most common injury risks you may face has to do with proper footwear. You want an all-leather-upper with a sturdy toe box that **protects the foot and toes from items dropped** (such as a tilt-up or mobile ramp, ladder, dolly, hatchway door or similar objects). But it's not just the top of the shoe that is important. The right selection of footwear can also help **prevent a slip and fall** from either the same level - or from elevated surfaces such as ladders, stairs, ramps and boat slips. A shoe's outsole is responsible for its slip-resistant quality, so it is important to carefully examine the sole of a shoe to determine its slip-resistant ability. The following guidelines can help determine which types of slip-resistant outsole are best:

Examine the outsole pattern. Outsole treads are designed in many different patterns. You want an outsole that provides a **micro-channel tread pattern** – which essentially channels liquids away from the bottom of the sole as you step. The pattern is also responsible for gripping the floor when the shoe comes in contact with a wet or oily surface. The tread pattern creates a tunnel through which liquid is dispersed, creating the slip-resistant effect. You want a tread pattern that is open at the edge of outsoles that allows water to escape as you step.

Avoid any tread pattern that creates a wall at the outer edge that prevents liquid from moving away from the shoe sole. This can potentially cause the wearer to hydroplane. For this reason, it is best to select a tread with **a broken pattern extending to the outer edge** of the outsole. Given that there is no flat edge, the channeled tread acts like a moving pad, with more rubber hitting the floor and water dispersing rapidly every time a step is taken on a wet or oily surface. To create even better traction, choose an outsole designed with snipes or small incisions that divide the tread shape into three or four movable parts. These snipes channel even more liquid to the outer portion of the outsole, increasing the slip-resistant effect.

Note the space and depth of the tread. If each individual shape of the outsole's pattern is too close together, the space may not be wide enough to channel liquids to those outer edges of the outsole. Liquid trapped beneath the sole could cause a hydroplaning effect. Therefore, **look for the shoes with at least two millimeters of space *between the tread pattern shapes*** for maximum safety. The same concept applies to tread depth. If there is not enough space between the bottom of the tread and the bottom of the shoe, liquid will not be able to disperse quickly, potentially increasing the chance of a slip or fall. **There should be about three millimeters between the sole of the shoe and the bottom of the tread.**

Monitor the tread depth of your shoes with wear. Shoe tread is similar to the tread on your automobile's tires. Just as a tire's tread thins over time, an outsole's tread depth is reduced by wear. For this reason, monitoring the tread depth of your slip-resistant footwear is crucial in deciding when to replace your footwear.

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Choose the right shoe for the right environment. If you will be going up and down stairs, boat ramps or ladders frequently, choose a shoe with a tread pattern that covers the entire outsole and heel for maximum slip-resistance. Maintain a three point contact using railings and keep your feet perpendicular to stair edges and rungs in order to maintain the best slip resistance. Consider chemically-resistant boots for chemical-intensive tasks that might otherwise soak into regular footwear (e.g., spraying or other chemical applications over large areas).

Knee Pads

Knee pads should be worn for prolonged or repetitive kneeling tasks on hard surfaces. This protects the knees when kneeling on objects such as small stones or other objects; as well as from cumulative trauma associated with applying pressure on the knees that can accelerate wear in the tissues ands structures of the knee over time.

Protective Eyewear

If you are working with chemicals that are sprayed, could splash, or chemicals that are corrosive you should wear goggles that form a good seal around the orbit of each eye. Check the Safety Data Sheet of the chemical to determine whether goggles are called for and the type that is ideal for the product you are working with. If you wear sunglasses for reduced glare and light-reflection on the water, make sure they offer UV protection and are impact-resistant with side shields incorporated into the glasses if working with power tools.

Hand Protection

Make sure you have a good pair of leather work gloves available for tasks that could abrade or lacerate the hands – such as rope burns when handling boat lines, or sharp metal edges on ramps or ladders. Work gloves can also protect the hands and fingers that might be caught or pinches between objects such as boats that can move unpredictably in water or when loading or off-loading from a trailer or boat dock.

Impervious gloves may also be needed for handling some chemicals (consult the chemical product's Safety Data Sheet for guidance on when gloves may be needed and the correct type of glove). Burns from hot motor parts or metal surfaces that are exposed to the sun may also call for a work glove. Kevlar (cut-resistant) gloves should be used with any utility or other knife handling. Rubber gloves should be used if handling any bait, fish or other marine animals.

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Respiratory Protection

Depending on certain marina or boat repair and maintenance activities, you may need a dust respirator for dusts, or a cartridge respirator for chemical fumes or vapors. Make sure your lungs remain protected in these circumstances by wearing the proper type of respirator for the exposure. Consult chemical Safety Data Sheets for guidance on the proper type of respirator for your particular application. A respiratory medical evaluation may be necessary and fit for duty testing.

When spraying a catalyzed paint product, the requirement for proper protection is for the employer to provide an appropriate air-supplied respirator for the painter. Such air-supplied respirator must be supplied with Grade "D" Breathable Air. Regardless of spraying a solvent-based or waterborne paint, they all are a catalyzed paint system and require the use of an air-supplied respirator. Follow the instructions as listed on any product's Safety Data Sheet and product labeling. Be sure to wear the proper type of respirator as instructed. Respirators may not be shared and must be maintained as instructed by the manufacturer - including storage in an enclosure with the user's name on it.