



Living with a Paintball

(Storage and Handling Tips for Paintballs)

We all interact with the environment. When it is hot, we find ways of keeping cool. Humidity makes hot weather sticky. In the cold, we cover up. Water freezes. There is no escaping the effects of the environment on our daily lives. So too for a paintball, it may be hard to visualize, but think of a paintball as a living, breathing thing. Let me explain...

The shell of a paintball is made with gelatin and glycerin. The shell contains very little water and is brittle. Both the gelatin and glycerin will dissolve in water. Since the shell contains so little water, it will absorb water like a sponge when it is humid. Cold air is relatively dry and will pull water from a paintball shell. Extreme hot and cold temperatures will adversely affect a paintball's performance. Throw in high humidity at high temperatures and a paintball will give you more difficulty than a burr in a barrel. But the buck doesn't stop at the shell. The paint is also water soluble and interacts with its surrounding(s)-the shell.

The paint does not contain water either so when the shell starts to pick up extra water, the paint starts to draw in some of the extra moisture. When things start to dry up on the outside, the water in the paint goes out the proverbial window as well. The whole situation adds up to a challenge for the most experienced heating and cooling technician let alone a paintball player. Let me now give you some practical storage and handling tips for all weather conditions...

First I would like to remind you of the recommended storage conditions for most brands of paints. Optimum temperatures range from 59°F to 86°F (15°C to 30°C) and 40 to 50% relative humidity. Temperatures and/or humidity beyond either end of those ranges will adversely affect the performance of a paintball. The longer the exposure to these extreme conditions, the less reversible the effects. How long is too long? In very extreme conditions, 20 to 30 minutes exposure may be enough. An exposure of 45 to 60 minutes in moderate conditions will be sufficient. Humidity will have less effect if the paintballs are kept in plastic bags and securely closed by twisting the bag and tightly sealing shut with the twist tie. Now here is what you can do at the field...

I think most players will agree, for a number of reasons, that the best time to play paintball is in the spring and fall. Temperatures are usually in the range of the optimum storage conditions and the humidity is low. So what happens in cold weather play? Paintballs become very brittle in the cold. This is apt to cause breakage in the carton, loaders, hopper, barrel and of course, on the target. While breakage on the target is preferred, anywhere else can be a mess. So keep the paint in a warm car while you are playing. Between games, store your butt packs, loaders and hopper in the car. Refill your loaders just prior to heading out to the field and keep in mind the exposure times mentioned above. Also, keep the paint sealed in the bag. If left in an open bag, the paint will dry out, adding insult to injury. Some people report an above average number of balls rolling out the barrel. This could be due to contraction if the paint is very cold. Choose a barrel diameter to suit the day's conditions. Freezing temperatures and conditions will cause dimples to appear on paintballs. Dimples will not come out of a paintball. If you suspect paint has been frozen throw it out. Do not confuse dimples with flat spots. Flat spots are often found at the bottom of the case and do not adversely affect the performance of a paintball. If you find flat spots on paintballs throughout the case, it may be an indication of exposure to high heat or humidity.

In the heat of the summer, barrel breakage is rare. Breakage on target could also be a problem as paintballs get soft from the heat and humidity. So now we must keep the paint dry and cool. Room air conditioning may be good enough for the player but air conditioned air still contains 70 to 80% relative humidity. Keep the bags closed tight! If you begin to get a lot of bouncers, chill the paint in the refrigerator (not the freezer) for 30 to 60 minutes - NO LONGER! The air in the refrigerator is cool and dry and will condition the paint for use on the field. Between games, store your butt packs, loaders and hoppers in the air conditioned car (not in the trunk!). Refill your loaders just prior to heading out to the field. Keep in mind the exposure times mentioned above.

Author: Tony Robson of ZAP Paintball, contact through www.zappaintballs.com